

American Aviation

The Independent Voice of American Aeronautics

FEBRUARY 1, 1947

Another Inquisition

THE CURRENT inquisitions on air safety in both branches of Congress and the face-saving "emergency" regulations by government agencies are about as necessary as skis in Florida.

This is the fourth or fifth such Congressional inquiry and the story is getting a bit tiresome. The record is being worn thin. There are the same headline-seeking, job-seeking and presidential-aspiring politicians. There are the same government officials who become overnight experts on anything and everything. And as usual the pilots are made

out as dopes and airline managements are put in the category of criminals who deliberately set out to kill people.

Congressional inquisitions "just don't happen." Constructive-minded Congressmen who really want to get something accomplished don't resort to publicity-seeking public hearings. Aviation has been for the past 25 years a wonderful lever to attract national attention but the industry is tired of being a scapegoat and we believe the public is both weary and uninterested.

On the Senate side, Senator Owen Brewster almost fell over himself in his rush to grab the chairmanship of the aviation subcommittee of the Senate Interstate and Foreign Commerce Committee. He needs a press build-up for his campaign for the Republican vice-presidential nomination in 1948 and there is even reason to believe he mistakenly thinks he has a chance for the presidential nomination. Underlying his almost every move on aviation is his persistent drive for enactment of the McCarran community company bill which would establish a U. S. international air monopoly. The series of air accidents is serving as a useful lever in the long-range campaign for a chosen instrument. If Senator Brewster is really interested in furthering safety in the air there are a great many ways of achieving progress without headline-seeking hearings.

In the House of Representatives the inquiry into safety matters is on more sound grounds, but here again one must beware of so-called "friends of aviation" who push for investigations, for sometimes in the House this "friendship" has been a lever for jobs in aviation. More aviation "experts" crop up in the House than there are in the industry itself. Not all are of the caliber of Rep. Clarence Lea or of Bob Ramspeck, now with ATA. The political life of the average Representative is relatively

(Turn to page 6)

Fortnightly Review



Braniff Executive Vice President

Charles E. Beard, who has headed the traffic activities of Braniff Airways since 1935, was advanced recently to position of executive vice president. An officer and director of Braniff for the past 10 years, he assumed added duties under a reorganization of administrative functions just announced. (See page 20).

In This Issue

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American Aviation

Volume 10 Number 17

The Independent Voice of American Aeronautics

February 1, 1947



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American Aviation Daily: The only daily news service for the aviation industry. Published daily except Saturdays, Sundays and holidays since 1939. Dispatched via airmail or surface mail for overnight delivery in the United States. Subscriptions: \$15 one month, \$170 one year. Airmail delivery to points outside the United States at additional cost to cover postage. Service Bureau available to all subscribers. CLIFFORD GUEST, Managing Editor.

International Aviation: A weekly newsletter of aviation trends and news in foreign countries. Published on Friday of each week and dispatched via first-class surface mail. Editorial representatives in foreign capitals. Subscriptions: \$100 one year (12 issues). Airmail delivery available at additional cost to cover postage. Service Bureau available to all subscribers. FRANK M. HOLZ, Managing Editor.

American Aviation Directory: Published twice a year, Spring and Fall. Complete reference data on administrative and operating personnel of airlines, aircraft and engine manufacturers, accessory and equipment manufacturers, organizations, schools, U. S. and foreign aviation groups and departments, etc. Completely cross-indexed by companies, activities, products and individuals. Single copy \$5.00. Fall-Winter 1946-47 issue now available. DAVID SHAW, Managing Editor.

American Aviation Air Traffic Guide: Monthly publication of airline schedules, rates and regulations for passengers and cargo transportation by commercial air transport. Supplements furnished subscribers covering changes occurring between issues. Subscriptions: U. S. and Latin America \$7.50 one year (12 issues and supplements); Canada \$8.00. All other countries \$9.00. Published and revised from editorial offices at 1317 North Clark Street, Chicago 2, Illinois. (Telephone: State 2154). H. D. WHITNEY, Managing Editor.

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AMERICAN AVIATION



Napoleon Lost at Waterloo because he was tired!

ON that hot June day 132 years ago, Napoleon surveyed the British legions across the Flanders Fields... but did not attack in force when the time was ripe. He had been riding all of the night before and he was very tired. Hence, his indecision and delay. Then Blücher came, and all was lost.

Thousands of American businesses doubtless have lost millions because of decisions arrived at and commitments made by tired executives who had spent days and hours in fatiguing travel prior to important business conferences.

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Editorial

(Continued from Page 1)

short, hence he must work fast to build himself up before the fickle electorate decides to make a change. In the House, as in the Senate, there are many ways to aid air safety without resorting to public hearings which bring those precious headlines for the home folks to see.

And can you imagine Congress setting up committees to investigate the 34,000 automobile deaths last year? Or the last series of bus and railroad accidents? Certainly 73 deaths out of 13,000,000 passengers do not create an "emergency," regrettable as any deaths at all may be. Congress has created agencies to deal with safety matters and if it has confidence in the creatures for which it was responsible, it need not distract itself from more serious duties to bother with details in a field of transportation about which it knows little.

There is no mystery about how air safety is achieved, but legislation is not one of the methods, and regulation can often misfire completely.

Air safety is, basically, a combination of intelligence in the cockpit and adequate airway and landing aids.

In the cockpit the pilot needs more than the mere ability to pass technique tests. He needs to have intelligence and he needs to have the right temperament. Perhaps greater selectivity in choosing pilot material would help; perhaps the training needs to be broader. And management probably needs more freedom to weed out misfits. But to attribute the predominant blame for the accidents of the past year to the pilots, as one aviation editor thoughtlessly did recently, is to misunderstand the underlying and complex reasons why accidents occur. Taking away pilot discretion is certainly not a cure-all. Surrounding him with a million gadgets and burdening him with complicated procedures and regulations and having his landing actions dictated by inexperienced Weather Bureau personnel, is definitely not a solution.

As for adequate airway and landing aids, no lengthy Congressional hearings are needed to determine what must be done. The administrative branch (CAA) provides the facts year after year. Congress' job is to provide the funds.

Right now there is a lot of loose talk about various types of landing aids. Radar has become a magic word. But what is needed is quite simple. No one item constitutes a landing system and no one item is a miracle within

itself. What is needed is a landing system consisting of the following: Ground Controlled Approach (GCA), Instrument Landing System (ILS), an automatic pilot device in the cockpit, high density approach and runway lights, and a fog dispersal system such as FIDO.

Airline management wants safety most of all. Accidents have serious effects on business. They cost a great deal of money. In the final analysis airlines want safety far more than does any government agency. And the same goes for the pilots whose own lives are involved.

As Donald Douglas said in his San Francisco speech recently, it is time for all government officials concerned with aviation safety to forget jurisdictional and factional differences and get into action. Congressional inquiries, buck-passing by government agencies, and making the airline industry a scapegoat, have no place in the constant drive to increase the already good safety record of the airlines.

Miami's New Wrinkle

WORTHY of historical note are the two innovations provided by the management of this year's Miami All-American Air Maneuvers. No. 1 was the placing of the grandstands on the east side of the field so that the spectators had to look directly into the sun to see the show. No. 2 was the staging of a race in the absence of the official timers who were otherwise engaged. The sun glass trade boomed and the race was run over the next day with the timers present. Miami was ever thus.

A Good Man Retires

ONE OF THE first truly voluntary retirements has taken place in a still-young air transport industry. H. K. Rulison, treasurer of American Airlines since 1942, and an important figure in the company since its inception, has retired from active business life. Rarely if ever in the spotlight, Rulison was one of those able behind-the-scenes men who made the industry tick. His counsel will be missed.

A Leader Unhonored

THE WAR Department has been giving out with considerable generosity medals and honors of all kinds since the war's end. Yet one name has gone without recognition. The late P. G. Johnson, president of Boeing Aircraft Company, was just as much a war casualty as any soldier on the field of battle. His contribution to the war in terms of B-17's and B-29's couldn't be measured adequately in terms of rewards. He was one of the true aviation pioneers. It has been a grave oversight on the part of the AAF and the War Department not to have honored Phil Johnson posthumously with an Air Medal or some other appropriate recognition. Will not Secretary of War Patterson undertake to amend this oversight before any more time elapses?

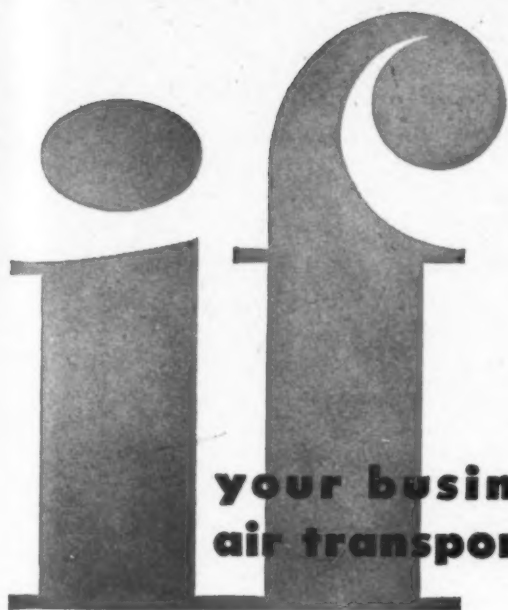
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Wings of Yesterday

25 Years Ago

Lt. C. V. Haynes, U.S.A.S., made record non-stop flight between Dayton, O., and Washington, D. C., in a special DH-4 messenger ship. The trip took two hours, 55 minutes, making the speed slightly more than 147 mph. (Feb. 4, 1922)

Army Air Service personnel at Carlstrom Field,, Arcadia,, Fla. held an airplane meet. (Feb. 4, 1922)

U. S. Senate passed the Wadsworth Bill (S. 3076) which provided for a Bureau of Aeronautics in the Department of Commerce. (Feb. 15, 1922)

15 Years Ago

Ruth Nichols established altitude record of 19,928 ft. for Diesel-powered planes at Floyd Bennett Field, Brooklyn, N. Y., flying a Lockheed Vega, equipped with a Packard-Diesel engine, (Feb. 14, 1932)

Letters

GCA Run-Around?

To the Editor:

It would be unsporting to say "I told you so," nevertheless such an attitude would be completely justified in view of the latest press releases regarding the run-around given to the system of ground-controlled-approach at the Indianapolis evaluation trials.

Several months ago I wrote, stating that ground controlled approach—using radar—was as safe as any man-made method of landing fog-blinded aircraft could be. Further than this, it would seem apparent to any straight-thinker that such radar controlled approaches could be made even safer after all personnel connected with their use had become experienced in such approaches.

About two months ago, the metropolitan newspapers carried the story that the NATS had in operation, for several months past, an all-weather airway from coast to coast. High point in the articles was the fact that all flights east-bound for the naval air station at Patuxent never had to cancel because of terminal weather. Radar, in this case GCA, took care of that worry.

The above is significant because: It re-

veals that on schedule airline operations are not only possible, but practical, since the effect of terminal weather is eliminated; that once an airman takes off for a destination hours away, he need not have the nagging worry that it may "sock in"; and, finally, the passengers that foot the bill would be able to take off in full expectation of landing where they intend to go. Thus, it's clear that such a system will please—and protect—the airlines themselves, the pilot personnel, and the passengers.

Lately it has been reported that the CAA, with Army cooperation, will set up GCA installations at several airports on an "experimental" basis. This should have been done a year or more ago. With GCA the Sabena aircraft could have landed at Newfoundland Airport; the United pilot at Cheyenne would have been lined up with the runway on the first go 'round; the AOA ship would not have needed to land at Stephenville because of Gander weather; and the Eastern pilot wouldn't have plowed into the lumber yard south of the Washington National Airport.

My personal experiences has convinced me that the average pilot can make a better instrument approach with the radar controller on the ground sharing some of the responsibility; in large aircraft there are enough tasks to weigh the pilots' minds down, and any easing of the load carried by these men makes for clear thinking in the cockpit.

It does appear that any system with such eminent advantages is entitled to a fair trial; however, it seems clear that such has not been the case. Even the Administrator is now reported to be conducting an investigation to determine whether he has been getting the "run-around" from his subordinates.

NEIL A. JOHNSON
Flight Radio Officer

Books

BIBLIOGRAPHY OF AVIATION STUDIES.
American Marketing Association. 18 pp.
Free of charge from Curtis Publishing Co., Philadelphia.

This is a compilation of studies relating to the economic and marketing aspects of aviation extending back over a period of years and attempting to be comprehensive and descriptive. It was prepared by the aviation committee of the American Marketing Association of which Richard N. Rush is chairman. Members of the committee include such well known research specialists as Wayne L. McMillan, director of economic planning for American Airlines; L. F. Hampel, manager of economic research for United Air Lines; and E. E. Lothrop, of Curtiss-Wright Corp. As a courtesy, Curtis Publishing Company has printed the studies for complimentary distribution. It is a valuable bibliography.

W. W. P.

AIR TRANSPORT AT WAR. By Reginald Cleveland. 324 pp. Harper & Bros. \$3.50.

Kex Cleveland, who can write an aviation book at the drop of a hat—and does—has performed a very fine service by writing the story of the Air Transport Command and the Naval Air Transport Service. Lt. Gen. Harold L. George, who commanded the ATC, has written a foreword.

Cleveland has had access to the official files, so his book may be taken as an authentic record of one of the great developments of air transport. There are some good photos and quite a few names of individuals who helped to build up the excellent flying record. If the book suffers it does so because of the lack of intimate knowledge of the war job by the author, i.e., the book is compiled from records, interviews, and the like. As a consequence some of the men who really contributed a lot—men like John Harlin of TWA—are not mentioned. Cleveland's attempt is a sincere one. His book is valuable. It is to be hoped that someone can now contribute a more personalized story to supplement Cleveland's good account.

W. W. P.

PROCEEDINGS OF THE WORLD CONGRESS ON AIR AGE EDUCATION. Published by Air-Age Education Research, 80 East 42nd Street, New York 17, N. Y. 116 pp. \$1.00.

The proceedings and abstracts of speeches of the World Congress on Air-Age Education, held last August at International House in New York, have been attractively put together for permanent use. A great amount of information is to be found between the two covers, chiefly from speeches by a wide variety of government and industry leaders as well as nationally-known educators. N. L. Engelhardt, Jr., director of the Congress, and his staff, can be commended for the compact manner in which the proceedings have been prepared. Should be especially useful in schools.

GAS TURBINES AND JET PROPULSION FOR AIRCRAFT, by G. Geoffrey Smith. Fourth Edition. Published by Aircraft Books, Inc., 370 Lexington Ave., New York. 250 pp. \$5.00.

This new edition of an important book has been very substantially enlarged over earlier editions. General Carl A. Spaatz, Commanding General of the U. S. AAF, has written a preface, Charles E. Wilson, president of General Electric has written an introduction, and Sir Geoffrey de Havilland has written a foreword. The author is the well known editorial director of *Flight* and *Aircraft Production*, two important British publications.

Instead of 10 chapters there are now 21. The treatment of the subject of turbine power is exhaustive and there are about 300 photographs, drawings and graphs. A complete analysis of all known jet-propelled airplanes and engines in operation or projected is given. The book has rapidly become a standard reference work.

Obituary

Claire L. Barnes

Claire L. Barnes, 66, president of Bendix Helicopter, Inc., Stratford, Conn., died in New York, Jan. 17. In retirement for six years after resigning as president of the Houdaille-Hershey Corp., Barnes joined the helicopter company as a vice president in 1944 and was made president in March, 1945, upon the death of Vincent Bendix.

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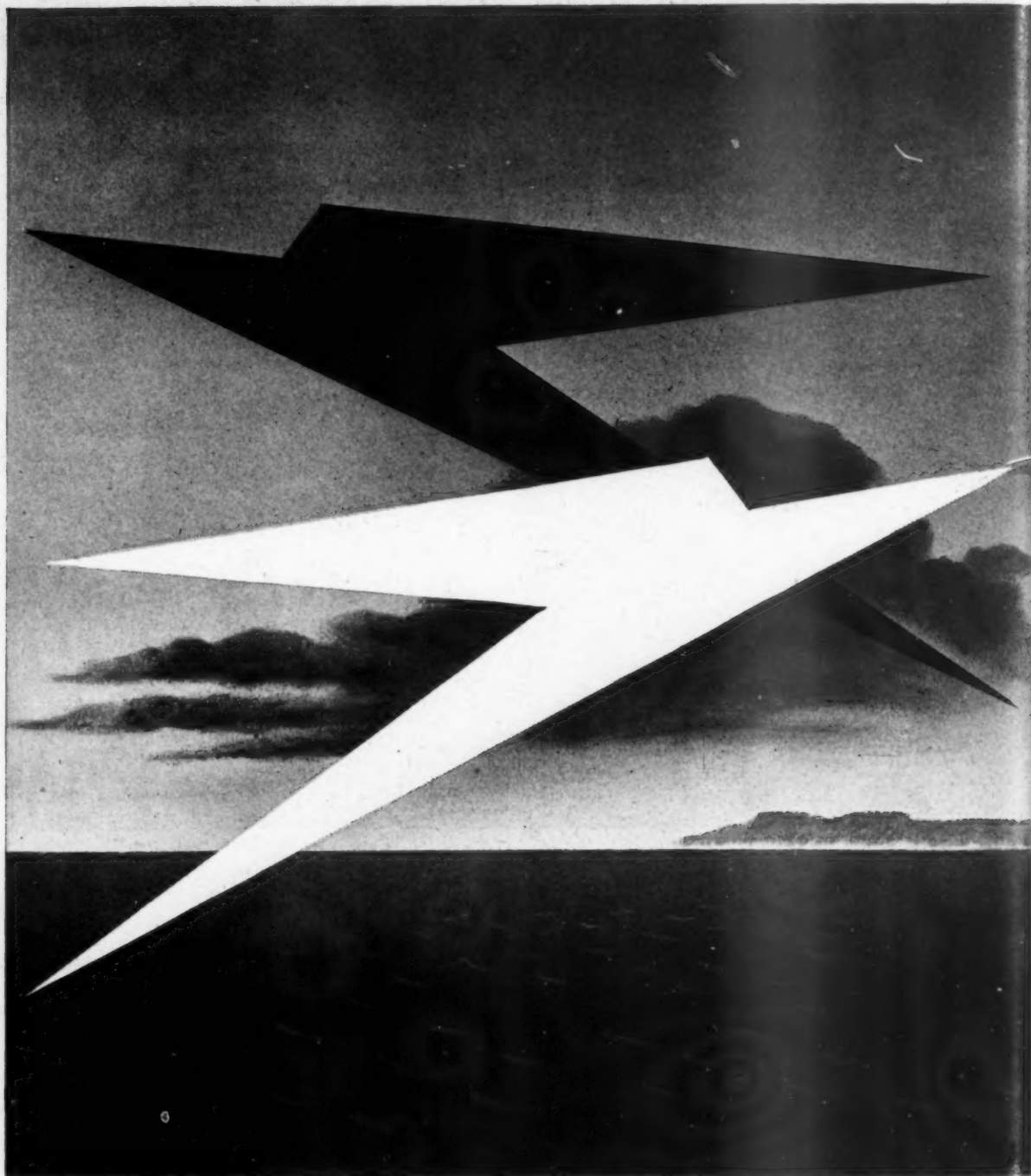
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Background and Trends

(Significant Developments and Forecasts Based on the Fortnight's Top News)

Red Ink: Several airlines are reaching the critical stage financially.

Is CAB Courageous?: During the war when 90% load factors prevailed, CAB took two drastic and quick steps. It slashed mail pay of the airlines to pittance and it issued tough show cause orders on why fares should not be reduced. Industry had no choice but to go along. Now that a number of airlines are hard hit financially, will CAB move as quickly to restore the mail pay?

Orphans in the Storm: One certificated airline filed for a mail pay revision a year ago, has never had any action from the CAB since. Its current mail pay is still based on single-engined mail planes discarded in 1944. You've got to have a special friend in CAB these days to get anything done. Strange how certain procedures get action within a week or so.

Smart Move: The Braniff-Continental plan of consolidating ground services at 11 airports they serve jointly will be joined by other airlines in that general area. It's a move long over-due and will result in considerable economies. It also jumps ahead of the larger plan for joint airline terminals at larger cities.

Contracts by Negotiation: The Navy has asked Congress for legislation which would permit the Army and Navy to award contracts by negotiation rather than by competitive bidding "when the national defense or sound business judgment dictates." The move has long been discussed favorably.

Inspectors on Planes: Airlines are shuddering at CAA's latest proposal stimulated by the safety crusade. This is the planting of inspectors on commercial flights to observe operating procedures and practices and checking on possible "short cuts." Fact is that most inspectors aren't qualified to judge what's right and wrong. And if a pilot is going to take a short-cut he certainly would never do so with an inspector on board. Plan is unworkable and impractical.

British Made a Bid: British South American Airways came close to invading the U. S. backyard in Latin America by buying TACA Airways. If Waterman Airlines hadn't stepped in at the right time, the TACA system probably would have gone to BSAA. If nothing else it would have demonstrated how terrifically obsolete and narrow is the U. S. policy on international aviation.

1947 Mfg. Gloom: Aircraft manufacturers, with exception of Douglas, have never been so gloomy as they are now. Those with good 1947 and 1948 business are worrying about subsequent years. Several companies are in or approaching critical stage financially.

C-97's For Parcel Post: To promote air parcel post program, Post Office Dept. has talked Army out of some Boeing C-97 Stratofreighters to begin series of experiments. Nation-wide demonstration will be designed to show need of legislation authorizing new type of air shipment.

Revising FCC Rules: A highly important decision to everybody in aviation from private pilots to airlines has been taken by Federal Communications Commission. It is undertaking first revision of its aviation rules since 1939. All who are interested must attend informal conference at FCC offices in Washington on Feb. 25 and oral argument will be held shortly thereafter. Drafts of proposals were not available at this writing—but revisions are broad.

More CAA Funds?: Congressional safety investigations will probably have one fruitful result: more funds for air navigation and landing aids. What Congressmen want to make sure of, however, is that the money goes for safety aids and not for expansion of inspection and other personnel.

Is it Unification?: Army-Navy. "unification" may be an "admirable compromise," but the plan submitted to Congress isn't pleasing everybody and will undergo changes. AAF gets its parity with ground forces, which is something good in itself. But Navy retains land-based aviation, including reconnaissance, anti-submarine and transport planes as well as carrier-based forces and Marine Air. So there is no single U. S. air force. Question of procurement isn't settled yet and is puzzling manufacturers who'd like to know who's who and what's what. But the "unification" will probably go through Congress in some form.

How Airlines Will Pay: Congress is determined that airlines will pay something for use of the federal airways system. The CAA has submitted a closely-guarded report to Congress discussing possible methods of payment. Best bet on how airlines will pay: through a reduction of fares for government personnel, which would save the government millions of dollars per year. Pan American already provides a reduction in Latin America. Fare reduction would avoid administrative costs of collecting money from airlines by other methods.

Is \$20 Per Ton-Mile High?: The fact that mail pay for All American Aviation, the nation's only pick-up system, is slightly higher than \$20 per ton mile—contrasted with the industry average of about 55c per ton-mile—was brought out during oral argument in the Great Lakes Area Case. While this figure may seem surprising at first, it does not appear to be so great when viewed in proper perspective. AAA President Robert Love points out that the cost to the government of transporting mail on Rural Free Delivery routes is in the neighborhood of \$2,000 per ton-mile.

Engines Being Rushed: With over a hundred engine-less Navions sitting on ground outside North American Aviation plant at Los Angeles, Continental is rushing engines as fast as possible to make up for lost time.

Douglas Aids Airlines: Douglas Aircraft Co. is aiding financially in the joint airline advertising program. All manufacturers had withdrawn earlier from the joint program but Douglas came back in because of the safety theme now being used.

TACA Moves South: Jack Thornburg, an able airline man with long experience with TWA, and who is now heading up the TACA Airways show on behalf of Waterman Airlines, is making a smart move. The day he took over he released 300 of the remaining 425 TACA employees at Miami, and he is moving the maintenance and overhaul base to Costa Rica. TACA's big mistake was trying to run a Latin American airline from Miami. Thornburg is putting it back where it belongs.

CONVAIR Merger Dead: The projected merger of Consolidated Vultee Aircraft Corp. and Lockheed Aircraft Corp. can be considered dead. It was killed by the zealous anti-trust division of Department of Justice which will learn the hard way at the expense of a lot of stockholders that there isn't enough business forthcoming to keep all existing aircraft manufacturers alive and that big airplanes don't come out of small poverty-stricken companies.

Drinkwater Delayed: Kept in the east by financing matters, T. C. Drinkwater, new president of Western Air Lines, isn't expected to go to Los Angeles to assume his duties until about Feb. 15.

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COOK'S TRAVELLERS' CHEQUES—INTERNATIONAL CURRENCY

Airline Daily Plane Utilization Drops

Industry Average Slips to 9.5 Revenue Flight Hours per Day In October; Eastern, Northwest, and TWA Get Most Usage

By LEONARD EISERER

In expanding their aircraft fleets and revamping schedules to meet public travel needs, the domestic airlines last year lost valuable ground in their efforts to obtain optimum daily plane utilization.

The decline in average revenue flying hours per plane was accelerated as the four-engined equipment came into use, and by October the industry average had dropped to less than 9½ hours per day, some two hours below the high levels of wartime operations.

Official CAB figures reveal that for January, 1946, the airlines obtained 10 hours and 23 minutes revenue flight time daily from their planes. For the next three months they squeezed a few minutes more from their fleets to meet the heaviest traffic demands, but in May the trend headed downward, and latest information available—through October—shows the decline

1946 compared with the same period of the previous year.

Eastern obtained greater revenue utility from its planes than any other carrier, keeping its craft aloft for the highest daily average of 12 hours and 53 minutes. This was only five minutes less than its 1945 figure.

Northwest with 11:12, TWA with 11:11, United with 10:37, Continental with 10:18, and Chicago and Southern with 10:09, were the only others to average more than 10 revenue flight hours daily during the 1946 period. In 1945 no less than 11 airlines were in that category.

Biggest changes percentagewise were experienced by Inland with a 26.6% drop from 1945, Colonial with 24.4%, and Delta with 20.9%.

Trip Lengths Decline; Longest Are Via TWA

The first postwar year was marked by slightly shorter trips by airline passengers. CAB figures indicate that for the first 10 months of 1946 the average airline journey was 430 miles, compared with approximately 450 the previous year.

Reflecting individual route charac-

teristics, the average journey-length varied greatly from carrier to carrier.

Longest air traveling was via TWA whose passengers averaged 846 miles per trip. Trips over five other lines—American, Eastern, National, Northwest, and United—averaged more than 500 miles.

The sole "official" feederline in the group, Pioneer, had a trip average of 285—more than that registered by Pennsylvania-Central Airlines (279), Inland (277), and Northeast (203).

The extent to which the airlines increased their service last year is also indicated in the table below showing the average daily frequency of one-way trips over each carrier's system.

United Air Lines offered the most frequencies, 24.6, compared with 18.1 the previous year, while American increased its average from 15.5 to 20.9. The airlines as a group averaged 21% more one-way frequencies than in 1945.

Colonial Airlines was the only carrier offering fewer average frequencies over its system in 1946 than in the previous year. Daily trips over its system declined 25%, from 13.7 to 10.2.

Percentagewise, Northeast registered the biggest increase in service—64%, boosting its average daily number of one-way trips from 6 to 9.9.

Eight of the 17 carriers averaged less than 10 one-way trips daily, Pioneer having the fewest with 3.9.

DAILY PLANE UTILIZATION DECLINES IN '46

	Hrs.		Hrs.
Jan.	10:23	June	10:02
Feb.	10:35	July	9:54
March	10:39	Aug.	9:56
April	10:36	Sept.	9:41
May	10:19	Oct.	9:27

unchecked. (The CAB data include only planes actually in service during the month).

While there were many contributing factors, the added maintenance problems arising from initial use of four-engined craft, and drastic re-scheduling required by the unprecedented travel flow were of primary importance in adding to the earthbound time. Flights added to handle the record business were necessarily concentrated during the peak daytime travel periods, thus disrupting the more even spread of schedules attained during war years.

All airlines experienced some drop in plane utilization, but there were, of course, wide variations among the individual companies, as shown in the accompanying table.

Continental Air Lines and Eastern Air Lines held the loss to a minimum with drops of only .5% and .6%, respectively, for the first 10 months of

	Avg. Daily Rev. Hrs. Fl.			Avg. Rev. Trip—Miles			Avg. Daily Freq. One-Way Trips Over System		
	Jan.-Oct.		% Change	Jan.-Oct.		% Change	Jan.-Oct.		% Change
	1946	1945		1946	1945		1946	1945	
American	9:44	10:06	-3.6	525	587	-10.6	20.9	15.5	34.4
Braniff	9:41	11:14	-13.8	404	435	-7.3	8.5	6.7	26.4
C & S	10:00	11:51	-14.3	395	429	-7.8	10.8	7.7	39.6
Colonial	5:28	7:14	-24.4	297	302	-1.6	10.2	13.7	-25.3
Continental	10:18	10:21	-.5	372	387	-4.0	5.5	4.0	35.6
Delta	9:47	12:22	-20.9	410	376	9.1	9.7	8.4	16.0
Eastern	12:53	12:58	-.6	514	496	3.6	14.3	10.7	34.3
Inland	6:21	8:39	-26.6	277	294	-5.8	4.6	3.7	25.1
MCA	7:44	8:02	-3.7	303	277	9.5	6.4	4.8	34.1
National	9:34	10:30	-9.9	590	470	25.5	10.3	7.8	32.6
Northeast	7:50	8:13	-4.7	203	213	-4.8	9.9	6.0	64.2
Northwest	11:12	11:44	-4.5	610	628	-2.8	15.0	10.5	42.8
PCA	9:00	10:12	-11.7	279	247	12.6	14.3	12.8	11.2
Pioneer*	5:13	...	...	285	...	...	3.9	...	...
TWA**	11:11	12:04	-7.3	846	889	-4.7	17.8	13.6	30.7
United	10:37	11:00	-3.5	604	764	-20.9	24.6	18.1	36.3
Western	8:04	9:30	-15.1	399	411	-2.9	9.3	8.3	12.8
	10:06	10:42	-5.6	430	450	-4.4	11.5	9.5	21.0

* Scheduled operations inaugurated Aug. 1, 1945.

** Domestic service only. Operations were suspended Oct. 21, 1946, due to pilots' strike.

Protests Mount Over CAA's Aircraft Recordation Policy

New Title Firms Charge For Service Dropped by CAA

By GERARD B. DOBBEN

A howl of protests from the private plane owners of the country is heading toward Washington and Congress over action of the Civil Aeronautics Administration in refusing to furnish, by mail, information as to title and ownership of planes recorded in CAA's Certification and Recordation Section.

Written inquiries as to whether there is a mortgage or lien against a specified plane are being answered as follows: "This Office is unable to furnish the requested information." The CAA letter then suggests that the pilot or prospective purchaser, who may live in Spokane or El Paso, make a personal examination of the files in Washington or employ one of three aircraft title companies to do the job for him.

The title companies charge from \$5 to \$15 to do what in most cases an efficient government clerk could do in little more time than it takes her to write the 134 word personal letter back to the pilot. One of the title companies named has two former CAA employees on its board of directors and the third is the son of a lawyer employed by CAA as regional counsel.

Broken Faith

Some of the pilots feel that the government has definitely broken faith with them. CAA officials called them in last summer and explained that Congress was demanding that civil aviation pay more of its own way. There appeared to be general agreement that imposition of a \$5 fee for registration of aircraft and another \$5 charge if a lien or mortgage was involved would be acceptable. CAA instituted the charges but said little about cutting service.

While CAA put out a rather innocuous notice last November when it decided to discontinue furnishing the information by mail, many pilots did not realize the impact of the curtailment until they received the answers to specific inquiries and after some of them had paid the fees to title companies. Then they started to complain.

James Batchelor, counsel for the United Pilots and Mechanics Association, revealed that the association had sent out approximately 20,000 ballots to determine how pilots felt on the question. He said on the basis of the first 600 returns, between 90 and 98% felt the present aircraft registration fee was excessive, that CAA should resume furnishing the information free as it had done before and that the entire matter should be presented to Congress. One question on the ballot asked the pilot what his state

Uncle Sam Pays Himself

When Congress asked commercial aviation to make a greater contribution to government aviation costs, and when CAA placed the \$5 aircraft registration fee in effect to meet this demand, few apparently realized that the government, through the GI Bill of Rights, would be by far the heaviest "contributor." It is roughly estimated that some 30,000 to 40,000 of the nation's 85,000 personal aircraft are engaged in GI flight training. As registration of title is an allowable cost, it is assumed that Uncle Sam has been quite busy transferring this money from one pocket to the other.

government charged for issuing a title to an automobile.

"We were led to believe that when the \$5 recordation fee was charged, CAA was going to install an up-to-date system. We expected an accurate record of costs would be kept and that better methods would result. Instead we find CAA cutting down the service," said Batchelor.

J. B. Hartman, Jr., general manager of the Aircraft Owners & Pilots Association, said that his association has under consideration the furnishing of aircraft title search service for a nominal fee to association members so they will not be required to pay the higher title company fees.

CAA Defends Move

CAA officials defended the move as necessary because of a lack of personnel. Omer Welling, speaking for Charles F. Dyer, director of the Aircraft & Components Service who was away from Washington, said that the Certification and Recordation Section had been swamped with flings and that the section was at one time from three to five months behind.

"The CAA budget was such that we just couldn't increase our working force, hence it seemed the only thing we could do was to discontinue furnishing this information by mail and devoting our efforts to catching up with our work," Welling stated. Welling said that registration had increased from 17,000 before the war to 65,000 at the present time. He said this number of planes could be involved in 2 to 2½ transactions in a year.

Welling said the recordation section compared to a county register of deeds office. The office is open to the public and anyone can go there for information but title search is ordinarily done by title companies.

CAA's letter to inquiries concerning aircraft ownership names the following three title companies: Aircraft

Title Service Co., Aircraft Title and Guaranty Company, and Aircraft Title & Search Division, National Aviation Service. None of these companies is listed in the Washington telephone directory under those names. None had a telephone listing in the foregoing names according to information given by the Chesapeake and Potomac Telephone Co. of Washington. All appeared to be sharing offices with other names on the door. Agents of all three companies were reached by phone by calling the office of the manager of the building in which they were located. Contacting these agents by long distances in hurry-up cases would be most difficult.

Title search of aircraft records is a simple matter. The writer went to the section, gave an NC number and was told to register his name and number in a book. A clerk went to the files, pulled the folder and brought it to him at a desk set aside for this purpose. To an experienced person, the information could have been gleaned in less than a minute.

TWA Out of TACA, Yerex Stock Reduced As Waterman Buys In

Complete liquidation of TWA's interest in TACA Airways S.A. and a substantial reduction in holdings of Lowell Yerex, founder of the company, were in progress last week with Waterman Airlines emerging as the dominant figure in the set-up of the Central American airline network.

The outright sale of Aerovias Brasil, one of TACA's largest companies, to Brazilian interests, plus cash being furnished principally by Waterman, a wholly-owned subsidiary of Waterman Steamship Corp., will result in TACA Airways S.A. (the holding company) being in a better position with regard to working capital, and sufficient funds will be available for all immediate needs.

Waterman's interest in TACA may go as high as 30% if the company exercises all of its stock options. It purchased \$500,000 out of a total of \$1,000,000 of TACA 4% convertible notes, and has options on 592,585 shares of TACA stock as follows: 290,086 authorized but unissued TACA treasury stock and stock now optioned under an employees' purchase plan, 183,333 TWA shares, 40,000 shares on which TWA has option but does not now own, 33,333 Pennroad Corp. shares, 45,833 Yerex shares.

J. W. Thornburg, vice president and general manager of Waterman Airlines, has been named president, director and a member of TACA's executive committee, succeeding Julius Holmes. TWA President Jack Frye remains as a director but has resigned from the executive committee.

In the opinion of TACA board of directors, Waterman is now in control of TACA, according to a statement in

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TWA May Lose Million

TWA may lose \$1,000,000 in liquidating its interest in TACA Airways if options on its stock are exercised within the next year. According to an SEC registration statement filed last year by TACA, TWA held 275,000 shares of TACA stock for which it paid an average of \$6 per share, or \$1,650,000. Parties holding options on this stock can exercise them before Jan. 31, 1948 at \$2 per share, or \$550,000. For the year following Jan. 31, 1948, price will be \$2.50, and for the following six months, \$3.

a TACA registration filed with SEC. TWA, Pennroad, and Yerex have agreed to vote all shares owned and optioned by them in such manner as Waterman directs during the period that such shares are subject to option.

Concerning Civil Aeronautics Board approval of the transaction, Waterman claims to be a non-scheduled carrier under CAB's exemption order. CAB General Counsel E. T. Nunneley stated that approval probably would not be required unless Waterman is operating as a scheduled carrier. The picture might change, he added, if CAB passes its proposed new non-scheduled exemption order. In this case, CAB approval might be necessary.

Of the other \$500,000 worth of TACA notes, Pennroad purchased \$250,000, the balance by other interests.

A year ago, TWA reported owning 275,000 TACA shares. In addition to Waterman's option on these, Pennroad has option on 45,832, other interests, 45,835. Of shares on which TWA has option but does not own, Pennroad has options on 10,000, other parties, 10,000.

Of Yerex's recently-reported 125,000 shares, 68,750 are optioned. In addition to Waterman, Pennroad has 11,462, other parties, 11,455.

The new executive committee of TACA consists of Benjamin F. Pepper, chairman of TACA's board and president of Pennroad Corp.; Frederick M. Peyser, of Hallgarten & Co., New York, and Joseph M. Paul, Washington attorney. Peyser, Paul, and John D. Warren, of G. H. Walker & Co., New York, were elected TACA directors. Herbert A. May has resigned as a director.

TWA Retains Aerovias Brasil Stock

Although TACA Airways has sold its 50.9% interest in Aerovias Brasil, S.A., Transcontinental & Western Air, Inc., retains its 900 shares, or 9%, it has been learned. The TACA interests were sold for \$750,000 to two residents of Sao Paulo, Brazil, Joseph Alfredo Almeida, of the Banco Brasileiro de Descontos, and Jose Antonio Gordinho. With 11,000 route miles, the airline has 15 DC-3's and C-47's, and is now 91% Brazilian owned, although TWA may endeavor to sell its stock to Brazilians.

CAA-CAB Rules Get Results: Operations Snarled, Passengers Irked, Pilots Frustrated

The ruckus in Congress over air accidents has messed up airline operations all over the country—and is costing the airlines lots of mazzoola which their bank balance would welcome.

Both Civil Aeronautics Board and Civil Aeronautics Administration got badly scared when Congress began crying for investigations and setting up committees to dig into the causes of accidents.

In their haste to beat Congress to the punch, both CAB and CAA issued some "emergency" regulations raising ceiling minimums which have done nothing but cause confusion and anger passengers. (See story on page 35).

As a matter of actual record there have been relatively few accidents directly attributable to landing attempts under low ceiling conditions. But the new regulations sounded good.

What the CAB did was to take away all pilot discretion and place responsibility in the hands of underlings in the Weather Bureau offices all over the country. As a result hundreds of airports are being "passed over." What burns up the passengers is that they circle an airport in full view of the field and the terminal and then are carried on to an alternate far away.

Unexplained Emergency

CAB issued its "emergency" regulation on Jan. 8, although it didn't explain what constituted the "emergency." CAB said that on and after that date the pilots would not have discretion in marginal weather and that Weather Bureau reports on ceiling and visibility would be taken as final. Whatever the W. B. said was the ceiling was to be authentic.

But what has actually happened is ludicrous except that passengers are getting sore and the airlines are losing money. Many Weather Bureau employees are apprentices, many are girls, many are scared to death to take responsibility. Charged with the new responsibility of giving the final word on whether a field is open or closed, many of them are playing it ultra-safe by reporting ceilings of 100 and 200 feet even though a 400 and 500 foot ceiling may actually exist. Sometimes it has been much worse.

American Aviation has seen authentic reports of pilots and dispatchers reporting erroneous ceiling marks established by the W. B. In one instance the pilot circled the airport at 4,000 feet with the airport in full view all the time. The W. B. was still reporting a 100-foot ceiling. The passengers squawked plenty when they were taken to an alternate and had to return to their destination by bus. In another instance there was a wide-open 3,000-foot ceiling while the W. B. insisted the field was closed.

On Jan. 14, the CAA, not to be outdone, established new and rigid regulations restricting operations of four-engined aircraft. Granted that a four-engined airplane needs more room for approach maneuvering than a DC-3, the regulation has produced some odd results which are creating no end of trouble with passengers. At some airports, DC-3's are taking off and landing while DC-4's are sitting on the ground. Passengers had been educated to the fact that four engines produced greater safety and, in fact, the CAA had been among those pressuring the airlines for more engines for greater safety. So it all turns out cockeyed when the DC-4's must sit on the ground.

Some airlines have suffered genuinely substantial financial losses since the regulations came out by having to pass over airports that were actually open. If W. B. personnel were capable of providing accurate ceiling measurement, the regulations wouldn't be so bad. But ground personnel are scared and find it easier to force the pilot to go on to another airport. Mere apprentices are dictating what a 17,000-hour pilot should do when he can see the airport from 3,000 feet.

It all sums up this way: Headline-seeking Congressmen stir up something on which they can make capital. Government agencies get scared, take hasty drastic actions. Underlings down the line get scared, decide to play things ultra-safe. Result is messed-up operations, irate passengers, frustrated pilots, and hefty losses for the airlines.

W. W. P.

Hook Heads CAA Airport Unit

H. Arthur Hook, a veteran of almost 20 years with the Civil Aeronautics Administration and predecessor organizations, has been appointed CAA assistant administrator for airports to succeed Charles B. Donaldson. His new assignment came as CAA embarked on its \$500,000,000 Federal Aid Airport Program.

Donaldson, CAA announced, was transferred at his own request to the Sixth Region where he will serve as airport engineer for the state of Nevada. He had been assistant administrator for airports since 1941.

Senate Confirms Young

The Senate on Jan. 27 confirmed the appointment of Clarence M. Young, of California, to membership on the Civil Aeronautics Board for a six-year term expiring Dec. 31, 1952.

Congress, Federal Units Share Responsibility For Unsolved Safety Problems of Air Carriers

The investigation by a Congressional committee of airline crashes may, in the opinion of some industry observers, have some beneficial effects for the airlines.

Hearings which were started by the House Interstate and Foreign Commerce last week tended to fix a major portion of the responsibility where many observers believe it belongs—on Congress and the regulatory agencies. And out of it all come definite expressions that an Independent Air Safety Board should be established to investigate air crashes and make recommendations for the regulations designed to eliminate them.

Republican members of the committee, including Chairman Charles A. Wolverton (N. J.), Carl Hinshaw (Calif.), Evan Howell (Ill.), and Leonard W. Hall (N. Y.), gave Chairman James M. Landis and the Civil Aeronautics Board rather rough treatment for their failure to bring to the attention of Congress the requirements for specific navigation equipment needed for bad weather flying. Some of these members hammered home CAB's responsibility as the agency which investigated airline accidents and promulgated the rules of flight. When Landis said the Board had not made a formal report to Congress of the needs, they asked him frankly why it had not been done.

When Landis said this was hardly in the Board's province, these members were quick to state that an Independent Air Safety Board probably would have done so. Former Chairman Clarence F. Lea (D., Calif.), reminded his colleagues that Congress had placed restrictions on the extent that its agencies could press for funds turned down by the Budget Bureau.

Blame for some of the air transportation safety problems was placed squarely in the lap of Congress by CAA Administrator T. P. Wright when he appeared before the Committee.

Wright asserted the real solution to aircraft accidents in bad weather lies in the improvement of air navigation facilities. He cited figures showing that CAA's Budget requests for technical development and for installation and maintenance of air navigation facilities since 1940 have been slashed from 30 to 80% by the Budget Bureau and Congress.

As Chairman Wolverton indicated that the committee would endeavor to learn why war time developments had not yet been put into general use on the airways and airports of the country, Wright detailed the advantages and disadvantages of GCA (Ground Controlled Approach) radar and an explanation of why CAA had chosen the Instrument Landing System as the primary bad weather landing aid, with GCA as an auxiliary.

He said CAA would seek supplemental funds for installation and operation of 20 GCA sets which the Army had offered to lend the agency because it lacked manpower to operate them. These are 1942-model sets, he said, but could be modified and installed for about \$75,000 each. Both Landis and Wright expressed the belief publicly that lives might have been saved in recent air crashes had some of these technical aids to aviation been in operation.

The members of the House committee were to be given actual demonstrations of ILS and GCA equipment at Patuxent Naval Air Station and Washington National Airport under Navy and CAA sponsorship. Later Army and Navy officials were to testify on the successful use of GCA equipment during the war. Air Transport Association witnesses and possibly heads of some of the airlines may be called before the hearing has been completed.

A Senate committee, headed by Owen Brewster (R., Me.), expected to get a similar investigation underway early in February.

COMPARATIVE SAFETY STATISTICS IN SCHEDULED AIR CARRIER OPERATIONS
(Domestic and International) Calendar Years 1945 and 1946

	Calendar Year 1945		Calendar Year 1946	
	Domestic	Int'l	Domestic	Int'l
Total number accidents	41	5	31	9
Total number fatal accidents	8	2	9	2
Passenger fatalities:				
Revenue	75	13	71	39
Non-revenue	1	4	4	1
Crew fatalities:				
Pilot	5	.....	8	1
Co-pilot	4	1	8	1
Other	3	9	6	10
Total fatalities	88	27	97	52
Total revenue miles flown	218,469,901	22,550,452	305,962,344	*37,921,624
Total revenue miles per accident	5,328,534	4,510,090	9,869,753	6,435,736
Total revenue miles per fatal accident	27,308,738	11,275,226	33,995,816	28,960,812
Total revenue passenger miles	3,506,884,281	317,975,415	*5,884,595,976	*1,038,076,140
Revenue passengers carried	6,576,252	321,643	*12,036,240	*1,013,016
Revenue passenger miles per revenue passenger fatality	46,758,457	24,459,647	82,881,633	26,617,337
Revenue passenger fatalities per 100 million revenue passenger miles	2.1	4.1	1.2	3.8

* Estimated figures based on 1st 9 months.

Aviation Calendar

Feb. 1-23—Inter-American lightplane cavalcade, Brownsville-Panama.

Feb. 1-8—New York Aviation Show, Grand Central Palace.

Feb. 3-4—Personal Aircraft Council, AIA, meeting Hotel Pennsylvania, New York.

Feb. 4—PICAO South Pacific Regional Air Navigation Meeting, Melbourne, Australia.

Feb. 4—International Air Transport Association European Traffic Conference, Lisbon.

Feb. 17—"Town Hall Meeting on Airports" in conjunction with American Road Builders annual convention, Palmer House, Chicago.

Feb. 17—National Association of State Aviation Officials, Engineering Section, Palmer House, Chicago.

Feb. 18-19—Airport and fixed base conference, Purdue University, Lafayette, Ind.

Feb. 25-26—Louisiana State Aviation Conference, Shreveport.

Mar. 1-2—Southern States Soaring contest, Sanford, Fla.

Mar. 1947—Aircraft Propulsion Meeting, Cleveland, auspices Institute of the Aeronautical Sciences. (Date not yet definite.)

Mar. 15-16—All-Woman Air Show in Tampa, Fla., sponsored by Florida Chapter of Ninety-Nines.

Mar. 17-19—Air Transport Association Engineering and Maintenance Conference, Hotel Statler, St. Louis, Mo.

Mar. 19-20—Regional aviation clinic sponsored by CAA and state aeronautics commissions, Congress Hotel, Chicago.

Mar. 27-28—Third Annual Philadelphia Forum of The American Helicopter Society, Inc.

Apr. 9-11—SAE Aeronautics Meeting, Hotel New York, New York.

May 5-10—International Travel Exposition, Grand Central Palace, New York.

May 6—PICAO Assembly Meeting, Montreal.

May 9-17—Metropolitan St. Louis Air Fair.

May 11-15—American Association of Airport Executives annual convention, Sherman Hotel, Chicago. (Airport exposition and exhibit trade show to be held in conjunction.)

May 26-29—American Society of Mechanical Engineers, aviation meeting, Los Angeles.

May 26-27—Institute of the Aeronautical Sciences light aircraft meeting, Detroit.

June 1-5—Aviation Writers Association annual convention, Los Angeles.

Nov. 4-7—National Airport Show and Institute, Municipal Auditorium, Cleveland, sponsored by Air Foundation and National Aeronautic Association.

Sullivan Declines Cargo Offer

Second Assistant Postmaster General Gael Sullivan has decided not to accept an offer to become president of Air Cargo, Inc., which will be the scheduled airlines' active ground service organization for air freight. Sullivan will stay with the Post Office Dept. indefinitely to "consolidate some of the gains" that have been made in the air postal service and to work for establishment of domestic air parcel post. Meanwhile, the Air Transport Association is still looking for a qualified president or operating executive for Air Cargo, Inc.

CAA Suggests Lower Government Air Fares In Return for Service

The Civil Aeronautics Administration, in a report to Congress on "Charging For Federal Airways Services," suggests a 10% reduction in government air travel fares as possibly the least objectionable and most practical method for additional airline participation in meeting the costs of government in civil aviation.

After listing alternatives and the possible objections to them, the report, without actually making recommendations, appears to steer down a middle of the road course, designed apparently to ruffle no one's feelings in the months remaining before the presidential election. If the 10% fare reduction is adopted for government personnel, everyone gets off the hook—the CAA, Congress and the airlines.

The report was submitted to Chairman Karl Stefan (R., Neb.), chairman of the commerce subcommittee of the Appropriations Committee, in response to committee requests made of CAA Administrator T. P. Wright last year. Rep. Stefan has indicated that his committee will ask CAA to make definite recommendations regarding charges for federal airway services when the agency comes before the committee in justification of budget requests for the fiscal year, beginning July 1, 1947.

CAA, in its report, asserts that a direct charge for use of airway facilities would be the preferred method of charging, but adds that imposing and collecting such a charge would be an administrative impossibility.

Gas Tax Ruled Out

Imposition of a federal aviation gasoline tax is ruled out at least until the problems of multiple taxation can be solved. Mention is made of the increasing burden of state fuel taxes as bearing on this situation.

Collecting an aircraft registration fee is regarded as inequitable because the greatest burden is likely to fall on the personal aircraft owner who normally uses the federal airways the least. To net any substantial return, the fee would have to be large, the report states.

Other alternatives considered for commercial users were gross revenue tax, transportation tax on both passengers and cargo traffic and tax on revenue miles flown.

While it may be necessary to amend the Civil Aeronautics Act to permit a lower rate for a special class of air travelers, the suggestion pertaining to the 10% reduction in the fare of government personnel probably will receive general support. The airlines, with load factors now at their lowest ebb in years, would have space to accommodate the increase in government air travel which might be induced by such a reduction.



Largest Cargo Plane—Scheduled for flight testing in April is the Consolidated Vultee XC-99, world's largest cargo plane. The military mammoth can carry 400 passengers or 100,000 pounds of cargo 8,000 miles. It is powered by six 3,000 hp Pratt & Whitney 4360 engines with propellers mounted on the trailing edge of the wing.

Presidential Aviation Budget Faces Close Scrutiny in Congress

While President Truman recommended to Congress budget estimates totaling more than one and a half billion dollars for civil and military aviation for 1947-1948, Congressional committees have started their work to pare these estimates on the basis of a Republican party economy pledge to reduce appropriations 20%.

Thus, with the opposition party in power in Congress, Presidential budget recommendations were not expected to mean too much this year. Aviation interests were hopeful that the cuts would be made intelligently on the basis of the best interests of aviation in general and the national defense in particular.

Listed below are estimated appropriations for the fiscal year ending June 30, 1947 and the budget estimates for fiscal 1948 by departments and agencies concerned with aviation.

The Air Corps budget estimate for procurement of standard aircraft, complete, for 1948 is \$440,000,000 compared with \$372,817,500 for 1947. A recommendation of \$13,000,000 is made for procurement of controlled missiles and \$4,640,373 for gliders and accessories, \$5,080,000 for industrial mobilization and \$111,580,000 for experimental research and development.

Of the half billion dollars recommended for BuAer, Navy, a total of \$261,000,000 is allocated for construction of aircraft and \$74,487,000 for research and development.

The CAA budget recommendation of \$102,462,000 consists of: general administration, \$6,891,000; maintenance of air navigation facilities, \$54,552,000;

enforcement of safety regulations, \$10,925,000; airport advisory services, \$282,000; maintenance and operation of aircraft, \$2,050,000; establishment of air navigation facilities \$25,194,000; technical development \$1,600,000; maintenance and operation, Washington National Airport, \$968,000.

Frye's Future Status With TWA to be Settled Soon

Whether Jack Frye will remain as president of TWA, or whether a new management will take over, will be determined probably within the next week, it was learned as this issue went to press.

If Frye resigns, it will be because he is unable to agree with TWA's policies and program now being discussed and worked out by the Howard Hughes interests, it was said. Hughes, TWA's principal stockholder, has made TWA a \$10,000,000 convertible loan and will have a majority of members on the board of directors.

If Frye leaves the company, it is probable that Paul Richter, executive vice president and long-time friend of Frye, will also resign. Hughes, according to reliable sources, wants Frye and Richter to remain, if they can see their way clear. There has been some discussion, it was learned, that Frye, if unable to agree wholly with the Hughes policies, might remain as chairman of the board. However, this has not gone beyond the "talk" stage.

A high TWA official emphatically denied that the sale of any of TWA's overseas routes to Pan American Airways had ever been considered by the company.

	Total Estimate 1947	Estimate 1948
Bureau Aeronautics, Navy	\$ 780,760,000	\$536,000,000
Air Corps, Army	1,039,500,000	850,000,000
Civil Aeronautics Administration	78,622,381	102,462,000
Civil Aeronautics Board	2,532,578	3,380,000
Weather Bureau	20,962,000	23,880,000
NACA	26,500,000	33,880,000
Totals	\$1,948,876,959	\$1,549,582,000



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Only Six of 10 Certificated Feederlines Now Operating

Serve About Half of Stops And Mileage Authorized

By KEITH SAUNDERS

Six of the 10 certificated feederlines have started operating, and as of Jan. 20 were serving 51 of their 110 certificated stops, an American Aviation survey of official CAB data disclosed.

The remaining four feederlines, two of which were not certificated until November, 1946, have been delayed in beginning operations because of normal organization problems, difficulties of obtaining desired equipment, and the inadequacy of airports at many route points, but all expect to be operating within a few months.

Somewhat the same difficulties were blamed by the six operating feeders for the fact that they are serving fewer than one-half their certificated stops and are flying only a little over half their certificated mileage.

Certificates of three other feederlines—Iowa Airplane Co., Parks Air Transport, and Wisconsin-Central Airlines—are being held in abeyance until they can make a showing as to airports on their proposed routes.

The CAB-certificated feederlines already in operation and the extent of their coverage are:

Empire Airlines, Inc., of Lewiston, Idaho, certificated in the West Coast Case decision last May 22 to serve 15 points on 709 route miles in Oregon, Washington, and Idaho, is serving 13 points along 694 miles of routes.

Florida Airways (formerly Orlando Airlines), of Orlando, certificated in the Southeastern States Case last March 28 to serve 10 route points over a 463-mile system, has made 248 miles of routes operational and is serving five cities.

Monarch Airlines of Denver, (formerly Ray Wilson, Inc.), was certificated last spring in the Rocky Mountain Case decision to fly 1,497 route miles serving 22 points in Colorado, New Mexico, and Utah, and has put into operation 864 miles of routes serving six cities. It was slated to inaugurate

service to the Montrose-Delta Airport about Feb. 1.

Pioneer Air Lines of Dallas, Tex., certificated Nov. 5, 1943, to serve six points and given another 12 cities in the Texas-Oklahoma Case decision last Nov. 14, making a total of 1,417 route miles, has so far served only the 683 miles between its six original certificated points, but has served notice of intent to begin serving 11 of the 12 newer points by Feb. 15.

Southwest Airways, of Beverly Hills, Calif., certificated in the West Coast Case to fly 1,181 route miles serving 24 points in California and Oregon has put into operation 643 miles of routes serving 15 cities, and has signified its readiness to start service shortly to Santa Rosa, Ukiah, Fort Bragg and Eureka.

West Coast Airlines, of Seattle, certificated in the West Coast Case to serve 21 points on 870 miles of routes in Oregon and Washington, has operated 370 miles serving six cities, and is preparing to start serving Tacoma.

Recapitulation shows that the six operating feederlines as of Jan. 20 were flying 3,502 miles of their 6,137 certificated route miles, serving 51 of their 110 certificated stops.

The four certificated feederlines not yet operating are:

Aviation Enterprises, of Houston, Tex., certificated last Nov. 14 to serve 28 cities on 1,824 miles of routes.

Central Airlines, of Oklahoma City, certificated Nov. 14 to fly 1,308 route miles serving 24 cities in south and southwest Texas.

Summit Airways, of Salt Lake City, certificated in the Rocky Mountain Case last spring to fly 1,613 route miles serving 16 cities, and which is completing details toward beginning of operations over a major portion of its certificated feeder routes April 1.

E. W. Wiggins Airways, of Norwood, Mass., certificated last June 13 to serve 22 cities on 643 miles of routes in New England.

All told, the ten feederlines are cer-

tificated to serve 200 points on 11,525 miles of routes, comprising 12% of the nation's total certificated route mileage of 91,525 miles.

West Coast Airlines is operating DC-3's, Monarch DC-3C's, Florida Airways Beechcraft D-18C's. Summitt proposes to use DC-3A's, Central is said to be planning on Beechcraft D-18C's, and Empire, currently using Boeing 247-D's, has Beech 18's on order.

TWA 4-Engine Pilots Get Pay Increase as Board Compromises

An arbitration board, appointed to compose the wage dispute which resulted in a strike of TWA pilots last fall, handed down an award last week which provided for four-engine pilot pay increases over the recommendations which had been made by a Presidential Emergency Board last July. Generally the award, which is binding on both pilots and management for one year, was regarded as a compromise between pilot and company proposals.

A first pilot in international operations, under the most favorable conditions as to routes and seniority, can earn up to \$14,800 annually—a sum which includes 10 hours a month overtime flying at \$13.50 an hour. The top base pay is \$1,100 monthly for 75 hours a month flying of four-engined aircraft, with maximum flying time placed at 85 hours per month.

Under Emergency Board recommendations, the top pay would have been \$12,078 annually on the basis of flying 80 hours a month. The Air Line Pilots Association, representing TWA pilots, had asked the arbitration board for a wage scale which would have permitted their first pilots, with eight years of seniority, to earn \$16,-164 annually.

\$925 to \$1,100 Monthly

The award of arbitration fixed the wages of first pilots flying internationally at a scale of flat rates ranging from \$925 to \$1,100 monthly, depending on the years of service with the company, with overtime at \$13.50 per hour.

Pay of first pilots flying Constellations domestically is fixed by a formula, which, based on 80 hours of flying per month, will produce approximately \$1,000 monthly for senior pilots.

Co-pilots' pay for international flying ranges from \$290 to \$520 a month, depending on years of service, with an additional \$50 a month for co-pilots qualified as navigators. Co-pilots flying Constellations domestically will receive from \$280 to \$460 monthly.

The award provides somewhat lower rates for pilots operating Douglas DC-4 aircraft domestically, Board members stated, but TWA has no such aircraft in domestic service at present. The pay rates for both pilots and co-pilots

Status of Certificated Feederlines

Name	Date Approved	Certificated		In Operation	
		Points	Mileage	Points	Mileage
Aviation Enterprise	11-14-46	28	1,824	....	....
Central Airlines	11-14-46	24	1,308	....	....
Empire Airlines	5-22-46	15	709	13	694
Florida Airways	3-28-46	10	463	5	248
Monarch Airlines	3-28-46	22	1,497	6	864
Pioneer Air Lines	11-14-46	18	1,417	6	683
Southwest Airways	5-22-46	24	1,181	15	643
Summitt Airways	3-28-46	16	1,613	....	....
West Coast Airlines	5-22-46	21	870	6	370
Wiggins Airways	6-13-46	22	643	....	....
Totals		200	11,525	51	3,502

are made retroactive to the signing of the arbitration agreement on Nov. 15, 1946.

Also included in the arbitration award were a number of rules relating to international operations. The decision on the major rules issues provide that the company pay pilots' trip expenses; moving expenses overseas and within the international division after two and one-half years at one base; sickness and injury benefits of 75% of pilots' salary the first seven days and full pay thereafter; foreign cost of living differentials equally with other TWA employees, and a month's vacation for pilots based overseas and two weeks for those here.

The existing bidding procedures have been changed (1) to permit the shifting of pilots within the International Division; and (2) to require 2½ years at an International Division domicile before the pilots can voluntarily move elsewhere. Where additions are to be made to the number of pilots on the International Division, the vacancies available will be open to bidding by all pilots.

PCA, Panagra Join List of Air Carriers Seeking Mail Boost

Pennsylvania-Central Airlines and Pan American-Grace Airways have applied to the Civil Aeronautics Board for more mail pay, making a total of seven carriers now seeking higher rates.

PCA asked for a rate of 18.2c per airplane mile for its operations between June 1, 1942 through Dec. 1, 1946. For the period beginning Jan. 1, 1947, it suggested 30c per airplane mile as a reasonable rate. It is now getting 0.3 mill per pound mile, the standard compensatory rate.

C. Bedell Monro, PCA president, said rising costs, general economic uncertainty, and the passenger fare cuts more than a year ago made higher rates absolutely necessary. Despite sharp economies, PCA is losing substantial sums each month.

Payments retroactive to June, 1942, it was estimated would net PCA about \$5,000,000, representing a return of 10% after taxes on the carrier's invested capital.

The proposed 30c rate is based on PCA's 1946 operating record. The board was asked to make any future rates tentative, to permit readjustments in the light of later experience.

Panagra asked for a rate of 31.67 cents per airplane mile now actually being flown in its scheduled services. Its present rate is 31.67 cents per mile for a 300 pound base load, but the rate is keyed to a daily designated mail mileage of 10,117 miles. This rate was set in 1944 but since then the daily designated mileage has increased some 70%. Thus, Panagra said, the rate "is inadequate, and no longer fair and reasonable under the circumstances."

Vicious Attack

Most vicious railroad advertising attacking airlines and aviation generally has been launched by Boston and Maine Railroad. Major theme is "You've Been Working on the Runway," endeavoring to show that airlines have profited hugely by public expenditures on airports and asking readers to investigate how much of its money is being used to support privately-owned airlines. No mention is made of landing fees paid by airlines, use of all airports by all types of flying, and national defense need of national airport system.

Panagra's petition said that rising costs and larger equipment call for more mail pay. Additional competition is affecting the company's revenues and costs.

Other airlines who have asked the Board for higher rates are Braniff, Chicago and Southern, Colonial, Continental and Northeast.

Delta Combines Air Freight, Parcel Post

A new mail order merchandising plan has been instituted by Delta Air Lines and Alden's, Inc. of Chicago, combining air freight with parcel post to speed deliveries to customers in Georgia and Florida communities.

Provided at no extra cost to customers, the service cuts 36 to 45 hours from usual shipping time. The initial shipment on Jan. 7 weighed 1,500 pounds, and the volume has increased steadily since then.

The mail order house affixes Atlanta precanceled stamps to each parcel, loads them in mail sacks according to destinations, and rushes them to Chicago airport, where Delta picks them up and flies them to Atlanta in a DC-4 in about three hours.

Birmingham, Knoxville, Jacksonville, Savannah and other major southern cities are to become distribution points in the air freight-parcel post delivery plan soon.

An overnight air catalog buying service, involving air shipping direct from the Kansas City warehouse of Sears, Roebuck & Co. to communities served by Continental Air Lines was inaugurated last July.

'Realistic' DC-6 Schedules

There is going to be some "realistic scheduling" when United Air Lines puts its DC-6s into service this spring, says UAL President W. A. Patterson. Although the DC-6s have been cruising at about 317 mph. in tests, they will not be scheduled this fast, thus allowing some leeway and more on-time trips. And "we won't be listing a five-minute stop when it takes four minutes for the plane to get from the end of the runway to the terminal building," Patterson adds.

Braniff Reorganizes And Promotes, Prior To Service Expansion

A major administrative reorganization creating several new departments and effecting important personnel promotions was announced last week by Charles E. Beard, executive vice president of Braniff Airways. Beard indicated that the action was required by postwar developments in the industry and in preparation for the inauguration of service on the company's extensive Latin American routes.

Paul D. Niles, formerly in charge of domestic traffic activities, was named chief traffic executive, succeeding Beard, who early last month was advanced to executive vice president.

N. E. Dodd, previously assistant to the director of research and planning, was promoted to director of budgetary control, a department whose operations were suspended during the war.

Heading a new department of purchasing, formerly a unit of the treasury department, is Horace Bolding, purchasing agent associated with Braniff since 1934.

T. R. Robertson, of the personnel research division, was appointed director of research and statistics, a department formerly under traffic.

Walter M. Henshel was promoted from publicity director to director of public relations, supervising publicity functions, plus domestic and international public relations activities.

A new department of industrial engineering was created, with a director to be announced later.

Operations Changes

Simultaneously, redistribution of responsibilities were made in the operations department by Vice President Ray Shrader, grouping all related functions under unified control.

R. V. Carleton, former chief pilot, was appointed director of flight operations, supervising all functions, related to flight personnel, flying of aircraft, dispatching and meteorology.

Former superintendent of operations, Jack Brough, was named director of ground operations, controlling all station operations and procurement of ground service equipment.

R. H. Van Horn, former director of maintenance and engineering, was named director of maintenance. Under the new arrangement, the storing of supplies, parts and accessories has been added to maintenance functions.

Administrative duties of R. M. Lewis, director of airports and facilities, were extended to include the Latin American service.

Promoted from assistant chief pilot to chief pilot was Dan Hughes, who has logged 11,175 flying hours and has been with Braniff since 1935. Bill Walner, new assistant chief pilot, has 10,281 flight hours, and has been with Braniff since 1936.

\$1,000,000 Hearing

Cost of the hearings in the Pan American domestic route case were estimated to run approximately \$1,000,000 by W. A. Patterson, president of United Air Lines, who hinted strongly that he felt CAB should have brushed the entire case aside. More than 6,000 pages of testimony were taken. Patterson said it would cost United approximately \$100,000 to put in its full case of opposition to the Pan American proposal.

Pan Am Announces Further Reductions in S. A. Fares

Pan American Airways on Jan. 20 cut its Latin American fares for the fourth time since V-J day.

According to Juan Trippe, Pan Am president, this most recent reduction, which affects more than 3,000 specific fares, will cut approximately \$2,500,000 off the estimated South American business for 1947.

Trippe said he believed that airline passenger traffic had decreased within the past few months because of increasing price costs on commodities and the only way that the airlines can get back the business loss or get additional traffic is to cut their fares.

Sample reductions made are: \$26 on the New York-Rio de Janeiro flight; \$21 on the New York-Buenos Aires hop; Miami-Balboa reduced \$21 and Miami-Caracas reduced \$15.

PAA has also announced a new low round-trip excursion fare of \$96.50 between Miami and San Juan, P. R., effective Jan. 18, cutting \$34.90 off the previous rate of \$131.40.

Winter excursion fares at a 25% saving have been inaugurated by PAA between Alaskan cities of Juneau, Ketchikan, Fairbanks, Nome, Bethel, McGrath, Galena, and Whitehorse, Y. T. They will remain in effect through April 20.

Damage Suit Filed Against EAL

Eastern Air Lines has until the middle of next week to file an answer to the \$500,000 damage action brought against it by Universal Air Lines, a non-certificated carrier, as a result of the freak accident near Washington just before Christmas.

A Universal DC-3 carrying 21 passengers and an Eastern DC-4, with 55 passengers, brushed in mid-air as they neared Washington, both having taken off from Newark. Both planes landed safely and none of the passengers was seriously injured.

Waterman Denial Urged

The joint application of Waterman Airlines and Waterman Steamship Corp. for a temporary New Orleans-San Juan certificate was recommended for denial by Examiner J. Earl Cox on Jan. 17. Cox concluded that the route could not support two-carrier competition.

Rulison Retires from AAL; Succeeded by Forrest

H. K. Rulison, who has served as treasurer of American Airlines since



Rulison

May, 1942, and who has been with the company since its inception, will retire on Feb. 15. He will be succeeded by Maulsby Forrest, for the past two years president of Riverbank Laboratories, Geneva, Ill., who also has been elected vice president of American. The board of directors elected C. W. Jacob, secretary of the airline, as vice president replacing T. C. Drinkwater. George C. Van Nostrand was named assistant vice president, and A. A. Paradis assistant secretary.

Dean Relieves Harold Bixby Of PAA Administrative Duties

Howard B. Dean, vice president and a director of Pan American Airways, has been appointed administrative vice president of the company, succeeding Harold M. Bixby, who had requested relief from administrative assignment to devote a substantial part of his time to personal business. Bixby remains as director and vice president, exercising executive responsibilities including that for PAA's interest in China National Aviation Corp.

Dean, who was in charge of PAA's Latin American affairs, is succeeded by Erwin Balluder, vice president, who will also represent the company's interest in Panair do Brasil. Vice President Wilbur Morrison, who heads Latin American operations, will also represent the company's interests in various Latin American national companies, including Avianca, of Colombia.

NWA Gets Temporary Mail Rate

Northwest Airlines has been granted a temporary mail rate of 85c per ton mile for mail service performed over its Alaska-Pacific route. The rate is retroactive to Sept. 1, 1946, the date Northwest began service on the route.

The CAB order establishing the rate said that a final rate, to be retroactive to Sept. 1, 1946, would be set after adequate experience and operating data have been accumulated. The 85c rate was suggested by Northwest in its request to CAB for a rate, filed Sept. 26, 1946.

PAA Free Trips Investigated

The Civil Aeronautics Board has ordered an investigation of a Pan American Airways tariff that offers free round trip passage to certain exchange students between Latin America and the U. S. to determine whether the free provisions may be "unjust or unreasonable, or unjustly discriminatory or unduly preferential."

New Services

Pan Am Starts Weekly Operation to Turkey

Pan American Airways was to commence weekly Constellation service from New York to Ankara, Turkey, on Jan. 31. The 5,631-mile trip is scheduled to require an elapsed time of approximately 25 hours, with stops at Gander, Shannon, and London. PAA resumed service between San Francisco and Manila on Jan. 20, with one flight in each direction each week. Daily schedules will be operated when additional equipment is acquired. The Manila service was discontinued Oct. 23, 1946, due to deterioration of communication facilities used during the war.

American Airlines has started operation of all-cargo planes from Boston direct to midwest cities with stops at Buffalo, Detroit, and Chicago.

Mid-Continent Airlines has scheduled first flights over its new southern route No. 80 from Tulsa to Houston via Tyler, on Feb. 1.

Western Air Lines plans to inaugurate service in March between Huron, S. D., and Minneapolis with two flights daily in each direction. Later Western expects to ask CAB to authorize non-stop flights between Denver and Minneapolis with four-engined equipment.

TACA Cuts Cargo Rates

Reductions ranging from 22% to 45% in air cargo rates between Miami and all points served by TACA Airways System in Central America and Mexico were placed in effect on Jan. 15 following similar cuts made on TACA's South American routes Jan. 1.

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ATA Maps Ad Campaign

The Air Transport Association is preparing a double-barreled campaign aimed at educating the public to the "real truth" about air safety and helping the public differentiate between the safety record of certificated, scheduled airlines and that of the non-scheduled, non-certificated carriers.

One phase of the campaign will be a series of advertisements to be published in leading U. S. newspapers, first of which will play up the 1946 safety record of the scheduled domestic airlines.

It is proposed also to place on all scheduled airliners a special insignia, also to be used in advertising and promotion, which would facilitate differentiation between scheduled and non-scheduled carriers.

Transport Notes

No Backlog: Having cleared up all backlogs or passenger waiting lists on its Atlantic Division routes, Pan American Airways officials say confirmed round trip reservations to any points on its routes in Europe or Africa are now available.

Load Factor Goal: A sales contest in which definite passenger load quotas are assigned to each station has been launched by Transcontinental & Western Air, Inc., to help achieve a minimum passenger load factor of 60% which E. O. Cocke, v.p.-traffic, has set for the remaining winter months.

Clipper Record: The 69,000 passengers transported during 1946 on Pan American Airways' Atlantic Clippers set a new commercial record for over-ocean flying. Piling up 1,162 trans-Atlantic crossings, plus its Bermuda flights, the airline amassed a passenger-mile total of 157,950,000 and tripled its 1945 passenger volume.

UAL Buys 'Copter—United Air Lines has purchased a Sikorsky S-51 helicopter in anticipation of the role the rotary-wing plane will have as a feeder craft. Delivery is expected May 18.

Freight Gain: Reports filed with CAB show that air freight ton-miles exceeded air express during October, 1946, for the first time in the history of the domestic scheduled airlines. Air freight for the month totaled 3,128,846 ton miles, an excess of 17% over the 2,653,491 ton-miles of air express.

Flight Kitchen: A flight kitchen opened at Washington National Airport Jan. 16 is the latest of 12 spotted at strategic cities along United Air Lines' system. It is capable of preparing a maximum of 500 hot meals a day.

Tot Seat: A papoose type seat for tots up to two years of age has been put into service by Mid-Continent Airlines. It is a product of the Infaseat Co., Des Moines, Ia.

Weight Reducer—Pan American Airways has discovered, following a year's study, that the average trans-Atlantic passenger weighs less on returning to the U. S. and carries 50 pounds less baggage than when he departed North America.

Airline Commentary

By ERIC BRAMLEY

ELSEWHERE IN this issue appears an advertisement of British Overseas Airways Corporation that we think deserves special mention . . . A BOAC aircraft is known as a Speedbird, and the ad is patterned after the way that John James Audubon, noted ornithologist, classified birds . . . It gives the Speedbird's range (" . . . seventy thousand miles, over the Atlantic and across the world"); habitat ("equally at home above five continents"); voice ("a sustained and even humming note"); identification ("at least eight variations of genus Speedbird are at present recorded"), and food ("oil and gasoline") . . . It's a novel ad, and credit should go to Robert Carley, vice president of Cecil & Presbrey Inc., advertising agency, for the idea . . . More of the same would be welcome . . .

Been reading about airline accidents recently? . . . A story in the newspapers at about the same time these accidents were being reported said that Gov. Earl Warren of California was very concerned about the state's obsolete highways because 3,800 people were killed in 1946 (in California, that is) in auto accidents and 80,000 were injured . . . (The domestic airlines carried 13,000,000 revenue passengers in 1946, killed 73) . . .

We're always interested in the two schools of thought on how airline passengers should get to and from airports . . . One school maintains that passengers are entitled to limousines and will turn up their noses at buses . . . The other says that you can't keep adding limos forever and that buses are okay if they're clean and comfortable . . . We now have one report on the subject . . . John Carey, president of Carey Airport Service Inc., which handles the airport traffic in New York, has some 23-passenger coaches in service . . . The reaction, he says, has been excellent . . . To add to his service, Carey now has a steward riding on each coach to answer questions, advise on New York traveling problems, etc . . . But the best thing is that the steward collects the fares en route . . . This should cut down the "standing around" time after plane arrivals and make it easier to pay your fare . . . It's definitely an improvement . . .

Johnny Grandland, Eastern Air Lines' district traffic manager in Detroit, tells us that Eastern has a new way of getting in touch with passengers . . . It seems that a lady in the Detroit suburb of Dearborn made a reservation to go to Miami . . . The EAL agent forgot to tell her that the flight would leave from Willow Run instead of from City Airport . . . Frantic phone calls failed to reach the lady, but suddenly Lillian Henriksen, EAL reservationist, came up with an idea . . . She called the Dearborn police, explained the situation to the dispatcher on duty, and he had a cruising squad car stop by the lady's house, find her, and tell her to call EAL . . . She did, and got to the right airport . . . This is what we call following up passengers . . . If the deal had failed to click, there would probably have been one no-show and one plenty-mad lady who would have gone around telling everyone what was wrong with the airlines . . .

We spent a very interesting time the other day poring over a consolidated airline timetable issued Feb. 21, 1929, almost 18 years ago . . . We noted that Colonial Air Transport flew New York-Hartford-Boston in two hours, 50 min. and charged \$25 one-way . . . American Airlines' DC-3s now do it in one hour, 42 min. and fare is \$9.60 including tax . . . The old Colonial tariff carried a note that "no passengers will be carried on trips flown in darkness" . . . We then turned to Chicago-Cleveland . . . Universal Air Lines flew this segment in two hours, 45 min., fare \$45 . . . United Air Lines' DC-4s now do it in one hour, 48 min., fare \$16.39 . . . The Universal tariff explained that "Chicago-Cleveland plane arrives at Cleveland in time to make train connections to New York and the east, and plane leaves Cleveland for Chicago after arrival of train from New York" . . . And here was a schedule labeled "transcontinental" . . . It covered Chicago-San Francisco, Boeing Air Transport's route . . . Time was 22 hrs., 40 min., fare \$200 . . . Today a United local schedule makes it in 13 to 14 hrs., fare \$98.27 . . . You may be interested to know that two-passenger cabin planes were used Chicago-Salt Lake City, and tri-motored 12-passenger planes Salt Lake-San Francisco . . . We would say that a little progress has been made.

CAB Proceedings

(A Summary of Applications Filed, and Actions of the Civil Aeronautics Board.)

Actions:

Jan. 10—Decision granting route consolidations to Delta Air Lines and Eastern Air Lines. (Docket 1971 et al.)
 Jan. 14—Order approving transfer of feeder-line certificate for Route 73 from Thomas E. Gordon, d.b.a. Orlando Airlines, to Florida Airways, Inc.
 Jan. 15—Order approving agreements between Transcontinental & Western Air and the Italian Government, relating to the Italian domestic airline, Linee Aeree Italiane. (Docket 2337).
 Jan. 22—Decision authorizing Aeronaves de Mexico, S. A., to use airport at Nogales, Ariz. (Docket 2644).
 Jan. 23—Decision authorizing Chicago and Southern, and Pan American to serve Montego Bay, Jamaica. (Docket 2436 et al.)

Calendar:

Feb. 3—Oral argument on route consolidations of American Airlines, United Air Lines and TWA, and on reopened portions of the West Coast Case. (Dockets 250 et al.; Docket 2142 et al.) 10 a. m., e. s. t., Room 5042, Commerce Building.
 Feb. 14—Oral argument in the Chicago-Seattle Case. (Docket 1602 et al.) 10 a. m., e. s. t., Room 5042, Commerce Building.
 Feb. 17—Hearing Freight Forwarder case (Docket 681 et al.) Postponed from Jan. 10.
 Feb. 17—Hearing on the airport complaint of the City of Akron, Ohio. (Docket 2332). Examiner P. Merritt Ruhlén. Tentative.
 Feb. 18—Hearing on the TWA-Delta Equipment Interchange Case. (Docket 2346). Examiner Herbert K. Bryan. Tentative.
 Feb. 18—Oral argument in the Kansas City-Memphis-Florida Case. (Docket 1051 et al.) 10 a. m., e. s. t., Room 5042, Commerce Building.
 Feb. 18—Prehearing conference on the Board's investigation of the Consolidated Air Freight Tariff. (Docket 2719—Agreement C. A. B. No. 698). 10 a. m., e. s. t., Foyer, Commerce Department Auditorium. Examiner Herbert K. Bryan.
 Feb. 24—Oral argument in the Mississippi Valley Case. (Docket 548 et al.) 10 a. m., e. s. t., Room 5042, Commerce Building.

Mar. 1—Hearing on Caribbean-Atlantic Airlines' application for Caribbean routes. (Docket 2246). Examiner James S. Keith. Postponed from Jan. 15, at the carrier's request.

May 10—Hearing on applications proposing Additional Service to Florida. (Docket 1068 et al.) Tentative. Examiner P. Merritt Ruhlén. Postponed from Mar. 10.

June 16—Hearing on the Minot-Regina, Sask., Application of Mid-Continent Airlines. (Docket 628). Examiner Lawrence J. Koster. Tentative.

Applications:

Air Cargo Forwarding Agency, Inc., Merchandise Mart, 2201 Grand, Kansas City 8, Mo., for a certificate or an exemption order, authorizing air transportation as a freight forwarder over non-scheduled domestic lines (Docket 2721), scheduled international lines (Docket 2722), and non-scheduled international lines (Docket 2723).

The Air Charter Co., 3800 Dahlia St., Denver, Colo., for an exemption order authorizing taxicab service within a radius of 450 miles of Denver, Colo. (Docket 2701).

Air-Con, Inc., Suite 1300, 7 S. Dearborn St., Chicago, Ill., for a permanent or temporary certificate authorizing air transportation as a freight forwarder over scheduled domestic lines (Docket 2715), non-scheduled domestic lines (Docket 2716), scheduled international lines (Docket 2717), and non-scheduled international lines (Docket 2718).

Airlines Freight and Express Co., Leon St., Kaminetz, Samuel M. Waranch, Robert F. Lavigne, d.b.a., Bldg. No. 311, Baltimore Municipal Airport, Baltimore, Md., for a certificate or an exemption order authorizing air transportation as a freight forwarder over scheduled domestic lines (Docket 2730) and non-scheduled domestic lines (Docket 2731).

Al Jones Airways (Al Jones and Anne B. Jones, d.b.a.), Bethel, Alaska, for a certificate authorizing scheduled passenger, property and mail service between Bethel and Nysac, Alaska, and between Bethel and Merkoruck, Nunivak Island, Alaska (Docket 2733).

Bremerton Seattle Air Lines, Inc., 1200 Westlake Ave., No., Seattle, Wash., for a

certificate authorizing scheduled passenger, property and mail service between Bow Lake Airport (Seattle-Tacoma Airfield) and Bremerton, Wash. 2nd St. Dock (Bremerton Seattle Air Lines Terminal); and non-scheduled passenger and property service between Bow Lake Airport (Seattle-Tacoma Airfield) and Seattle (Lake Union Seaplane Terminal). (Docket 2739).

Central Aircraft, Inc., c/o Herman A. Poulin, 8 Voltaire Ave., Yakima, Wash., for a certificate authorizing scheduled air mail service by helicopter over three circle routes out of Boeing Field, Seattle, Wash. (Docket 2754).

Compania Panamena de Aviacion S. A., No. 20 Avenida "A," Panama City, Panama, for a foreign air carrier permit authorizing scheduled or non-scheduled passenger, property and mail service from Balboa over three routes in the Canal Zone. (Docket 2700).

Consumers Air Freight Corp., 29½ Main St., Champaign, Ill., for a certificate authorizing scheduled passenger and cargo service over various routes between Illinois, Missouri, Mississippi, Alabama, Louisiana, Texas, Minnesota, Wisconsin, Pennsylvania, and New York. (Docket 2703).

Continental Air Transport Co., Inc., 33 No. LaSalle Street, Chicago, Ill., for a permanent or temporary certificate authorizing scheduled passenger, property, and mail service by helicopter between the Chicago Municipal Airport or any emergency airport in the Chicago district and the Chicago Loop District. (Docket 2617).

Leon Davidson, Box 643, Stuart, Fla., for a permanent or temporary certificate authorizing scheduled passenger, property and mail service between West Palm Beach and Daytona Beach, Fla. (Docket 3656).

Domestic Air Express, 1025 Mateo Street, Los Angeles, Calif., for a certificate authorizing air transportation as a freight forwarder over scheduled international lines. (Docket 2648).

Domestic Air Express, 1025 Mateo Street, Los Angeles, Calif., for a certificate authorizing air transportation as a freight forwarder over non-scheduled international lines. (Docket 2649).

SUMMARY OF U. S. DOMESTIC AIR TRANSPORT OPERATIONS FOR October, 1946
 Compiled by American Aviation Publications from Official C.A.B. Data.

TRAFFIC
 STATISTICS

AIRLINES	REVENUE PASSENGERS	REVENUE PASSENGER MILES	AVAILABLE SEAT MILES	PASSENGER LOAD FACTOR	MAIL TON-MILES	EXPRESS TON-MILES	FREIGHT TON-MILES	TOTAL TON-MILES	REVENUE TRAFFIC	AVAILABLE TON-MILES	% AVAILABLE TON-MILES USED	REVENUE TON-MILES	SCHEDULED MILES	% SCHEDULED MILES COMPLETED	TOTAL PLACES
All American	264,620	139,273,410	184,781,863	75.4%	671,325	633,519	1,930,121	16,719,822	4,769	19,471	24.5%	153,243	164,992	92.9%	13
American	52,567	19,937,408	29,089,207	68.5%	61,694	68,064	30,810	2,169,561	3,204,933	60.5%	6,443,006	6,267,972	97.9%	137	
Caribbean	4,339	270,147	671,563	40.2%	324	...	515	22,764	67,845	33.8%	30,356	28,512	96.5%	2	
C & S	33,280	12,624,981	19,952,376	64.6%	34,632	58,209	13,344	1,377,464	2,640,396	55.6%	740,474	748,565	96.6%	18	
Colonial	12,536	3,728,575	5,213,072	71.5%	6,107	8,196	...	390,081	574,833	68.9%	286,962	292,790	92.4%	17	
Continental	18,065	6,692,714	10,200,464	65.6%	17,496	8,314	10,499	711,464	1,076,916	68.3%	501,762	525,134	94.2%	13	
Delta	47,768	18,876,806	30,332,192	62.2%	58,968	56,475	20,193	1,972,030	4,590,813	44.8%	1,065,353	1,081,528	97.8%	19	
Eastern	148,921	76,336,946	117,917,636	64.7%	248,287	371,503	15,793	8,379,845	14,955,013	57.0%	4,152,630	4,120,569	96.9%	74	
Emelian	21,315	2,896,604	3,895,164	74.4%	3,076	9,064	47,477	311,557	535,187	59.1%	197,933	164,186	99.3%	8	
Inland	7,370	2,071,562	3,987,233	57.0%	5,345	2,068	1,583	218,045	383,946	56.8%	182,819	198,132	92.3%	14	
NCA	23,760	7,144,937	10,192,398	70.1%	18,174	13,238	...	750,988	1,115,527	69.2%	509,706	509,538	96.9%	12	
National	27,561	16,176,589	22,410,568	72.2%	48,657	17,934	13,435	1,746,650	3,509,051	51.5%	838,076	864,342	96.1%	17	
Portonac	44,723	8,793,972	14,996,443	58.6%	6,229	31,390	...	769,812	1,438,803	55.4%	460,651	533,360	87.5%	74	
Southwest	65,731	39,759,499	54,556,449	72.9%	189,628	162,304	...	4,268,455	6,664,759	55.2%	1,903,641	1,907,632	99.9%	35	
PCA	125,693	33,292,375	55,266,518	60.2%	49,797	178,057	139,315	3,376,725	6,105,583	55.9%	1,626,278	1,685,464	93.5%	94	
Pioneer	2,457	651,000	2,193,870	29.7%	1,569	733	...	59,531	165,689	38.9%	92,884	94,054	97.4%	12	
TWA	58,336	46,950,293	58,480,731	80.3%	267,029	286,104	213,374	5,306,010	7,316,640	77.8%	2,712,737	2,752,198	96.9%	88	
United	108,608	102,592,431	125,485,714	81.8%	753,122	688,787	669,484	11,861,565	18,805,764	64.6%	5,004,422	5,084,177	95.9%	102	
Western	51,274	21,115,801	34,487,993	61.2%	72,556	57,753	22,906	2,261,691	4,163,470	55.7%	923,733	948,476	96.7%	29	
TOTALS	1,178,944	559,185,650	783,313,454	71.4%	2,536,843	2,653,491	3,128,846	62,720,829	105,894,313	60.9%	28,953,659	29,127,397	96.5%	704	
Western's Traffic Statistics for September, 1946	151,185	80,907,576	104,931,255	76.7%	197,595	280,096	11,249	8,645,279	12,816,609	68.8%	3,734,004	3,697,036	96.4%	75	

NOTE: TWA operations were halted by pilot strike on Oct. 21,

February 1, 1947

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Carriers Must Now Conform More Closely to Airline Rules

Non-Scheduled Regulations Are Tightened By CAB

New regulations designed to make operating requirements for non-scheduled air carriers conform more closely to those enforced upon scheduled airlines were announced by the Civil Aeronautics Board, Jan. 21, on the eve of the opening of the Congressional hearing on air safety.

The Board said a review of recent aircraft accidents had indicated the need for a tightening of operating requirements for non-scheduled carriers, and that this had been accomplished through amendments to Part 42 of the Civil Air Regulations.

Non-scheduled carriers, especially those using multi-engined type equipment, will now have to operate under more stringent requirements as to aircraft maintenance, pilot flight time limitations, serviceability of equipment, weather minimum, instrument approach and landing rules, and required instruments and equipment.

A draft release circulated last fall for comment by the industry provided the basis for the amendments, which became effective, except in a few specific instances, upon announcement.

One exception, not to be enforced until next July 15, forbids the second pilot of a plane to fly under instrument flight rules unless he has been given a proper check-out as to instrument competency within the preceding six calendar months.

An amendment requiring aircraft of 10,000 lbs. or more maximum take-off to carry an auxiliary source of energy power to the gyroscopic instruments becomes effective Feb. 15.

More Experience Required

First pilots and second pilots of the same type of aircraft come in for special attention in the new regulations. A first pilot must (1) possess a valid commercial pilot rating for the class and type of aircraft he is to fly, (2) possess a currently effective instrument rating, (3) have logged at least 1,200 hours of flight time, including 500 hours of cross-country, and (4) have logged at least 100 hours of night flying, of which 50 hours shall have been cross-country.

Second pilots serving on such planes must possess a valid commercial pilot rating with a type and class rating for the particular aircraft.

Under the heading of weather minimums, the regulations now provide that no flight shall be dispatched un-

less current weather reports and forecasts indicate that at the place of intended landing and at the time of arrival there shall be a ceiling of 1,000 feet and visibility of one mile for day contact flight operations and 1,000 feet of ceiling and visibility of two miles for contact (visual) night operations.

The same ceiling and visibility requirements apply with regard to both take-offs and landings under contact flight conditions.

Weather minimums specified in the CAA Flight Information Manual, or as otherwise specified or authorized by the Administrator, apply at points of destination on instrument flight operations, as well as at points of take-off.

Alternate airports used in instrument flight operations must have 1,000-foot ceilings and visibility of three miles if served by a radio directional facility; otherwise, they must have a ceiling of 1,500 feet with broken clouds or better, and visibility of three miles.

General rules applying to pilots on aircraft of 10,000 lbs. or more maximum take-off weight provide that a pilot shall not fly as a crew member in air carrier service more than 100 hours during any 30 consecutive days, nor more than 1,000 hours in any one calendar year, and shall not do any other commercial flying if total flying time for any specified period exceeds these limits.

Pilots are to receive 24 hours of rest before being assigned further duty when they have flown in excess of eight hours during any 24 consecutive hours, and shall be off for at least 24 consecutive hours at least once during any seven consecutive days.

Special provisions are made in the regulations for aircraft with crew of two, three or four pilots.

Bankruptcy Hearing Feb. 10

Hearings will be held in Federal Court, Newark, N. J. on Feb. 10, in the matter of bankruptcy proceedings involving the Veterans' Air Express Co., Inc. Determination will be made at that time on the performance or modification of the bankruptcy order issued by the court on Dec. 9.

Barney Williams Joins Slick

Barney Williams, general agent for the Missouri-Pacific railroad's freight traffic department in San Antonio, has resigned that post to join Slick Airways, Inc., as general traffic manager.

Airfreight Group Flies 18,000,000 Ton-Miles During '46 Last-Half

Members of the Independent Airfreight Association, Inc., flew more than 18,000,000 ton miles during the first six months of the association's operations, according to Robert W. Prescott, president of the cooperative air freight group.

Beginning in July, the first month after the organization was formed, the participating lines flew 1,645,384 ton miles, Prescott said, and by the end of November the members had accumulated a total of 13,557,971. Prescott estimated that facilities of the cargo carriers will be tripled during the forthcoming year, pending the decision in the current Air Freight case.

Ground facilities of the freight group have been greatly enhanced by the establishment of the country's first co-operative airfreight terminal and plane maintenance service, Willis Airfreight Handling, Inc., Prescott stated. The first of the nationwide system's units is located at Teterboro, N. J., airport and is already handling more than 100,000 pounds of freight daily.

Members of the Independent Airfreight Association, Inc., are Willis Air Service, Inc., Slick Airways, Inc., The Flying Tiger Line, U. S. Airlines, Inc., and Flamingo Air Service, Inc.

Thompson New President Of Mercury Airfreight

W. L. Thompson is the new president and Niles O. Greer is the new executive v.p. of Mercury Airfreight Corp. Thompson, formerly v.p. in charge of transportation and sales,



Thompson

Greer

succeeded Frederick M. Blow who is the new chairman of the board of directors. Greer was formerly v.p. in charge of traffic and operations.

Markell Appointed to U. S. Airlines

Harold Markell has been appointed vice president and general manager of U. S. Airlines, Inc. H. R. Playford, company president, stated that the carrier has decided upon a policy of curtailment of operations except where profits are immediately indicated, pending CAB decision on air freight carrier's applications.

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NATA Mobilizes State Units to Fight Anti-Aviation Bills Throughout Country

With affiliates and prospective affiliates already functioning in 37 states, the reorganized National Aviation Trades Association expects to make its influence felt "behind the scenes" in many state legislatures this year.

Harry Meixell, executive director of the organization, says NATA on the state level is now opposing legislation considered hostile to the interests of the "grass roots" people of aviation—the aircraft sales and service people, airport owners and operators, flight instructors, charter operators and plane mechanics.

Reorganized too recently (at Cleveland in November) to work out a concerted plan of action in time for convening of the 44 state lawmaking bodies now in session, NATA is not taking any announced stand with regard to specific "anti-aviation" legislation but is urging the various state aviation trades groups to make their own decisions as to what bills to oppose and what ones to support.

When such decisions have been made, Meixell said, NATA headquarters promptly supplies the state groups with as much helpful information as it can muster, together with recommendations as to techniques and procedures to follow.

Many Bills to Oppose

Word reaching NATA headquarters from the state chapters indicates considerable aviation legislation has been introduced or is being prepared for introduction in the state assemblies. The measures most strenuously opposed by NATA affiliates, Meixell said, are the so-called "Uniform State Air Commerce Act," making intrastate air carriers subject to economic regulation by state public service commissions or public utilities commissions, and laws aimed at discontinuance of state tax refunds on gasoline consumed by aircraft.

Meixell said aviation activities at the nation's airports have mushroomed so much in the past year that it is difficult to make any close estimate of the number of individuals and companies engaged in the six categories of aviation trades embraced in NATA's membership, but estimates that have been publicized range from a minimum of 4,000 to a maximum of 7,000.

The 1947 program of the national body headed by Beverly Howard, president of Hawthorne Flying Service, Orangeburg, S. C., is the strengthening of existing state organizations, the reorganization of others that have been lying dormant, the creation of chapters or groups in states where there is no activity and has been none

in the past, and the promulgation of a model constitution and by-laws for such groups.

★ ★ ★ ★

The Connecticut Aviation Trades Association has been organized with 17 of the state's 39 airport operators as members. Officers and directors are Ernest L. Markham, Meriden, president, and Peter Renaldi, Plainfield, vice president. Other directors are John Usher, New Haven; Ted Matusewic, Hartford; Barry Baker, Simsbury; Harold Darling, Bristol; Harold E. Lumb, Danbury. Robert H. Halpin, Bethany, is secretary-treasurer.

★ ★ ★ ★

Norman Larson of Burbank has been elected president of the California Aviation Trades Association. Regional vice presidents elected are: Douglas Kelly, San Diego, southern; LeRoy Adams, Fresno, central; John Schwane, Sacramento, northern. Harvey Martin, Long Beach, was named secretary, and Richard B. Thurber, state executive director.

Miami Show Attracts Few Industry People

The 15th annual All American Maneuvers held in Miami Jan. 10-12 drew probably the smallest attendance from industry people in its history. But despite a low attendance by the public on the first day, and a moderate one on the second, the third day's show brought out probably the largest crowd ever gathered for an aviation show in Miami.

It was chiefly a show by Army and Navy—both good and both patterned after previous exhibitions. The women pilots were griping because the show management wouldn't let them stage a closed course race of their own, but the closed course events were of strictly minor interest as far as the paying public was concerned. The public wanted to see jets and bombers—and they got plenty of both.

As usual, things were somewhat topsy-turvy at the show. Carl Fromhagen had resigned in a huff as manager a month or so before the maneuvers. So had C. T. Al Hansen withdrawn from participation. The remaining management put the grandstands on the east side of the field so the paying public had sore eyes trying to witness the show between it and the sun. But the weather was good, there were hundreds and hundreds of lightplanes from the north, and the lightplane enthusiasts spent a whole week getting back north once the show was over. The weather north of Jacksonville was atrocious. Those who went to Miami had a good time. Those who didn't, really didn't miss much.

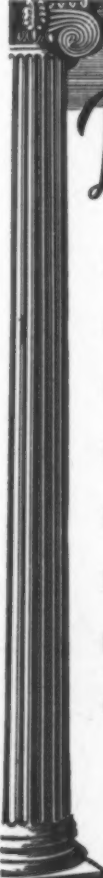


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AROUND THE WORLD

La Guardia Field Sought as Customs Free Port by ACC Group Studying Air Gateways

By FRANK M. HOLZ

La Guardia Field, New York, should be made a customs free port of entry for in-transit goods and passengers, according to members of the U. S. Air Coordinating Committee's sub-committee on Facilitation of Civil Aviation. This group has begun a study tour to study clearance procedures at U. S. air gateways, and La Guardia was the first stop.

The survey is headed by Harry G. Tarrington, director of international activities for the Civil Aeronautics Administration. The following government and private agencies are represented: CAA, CAB, Customs Service, Immigration and Naturalization Service, Public Health Service, Division of Foreign Plant Quarantines of the Department of Agriculture, Department of State, Air Transport Association and International Air Transport Association (IATA).

The first stage of the tour ended after the group visited New York, Burlington, Montreal, Buffalo and Boston. It will be resumed this month and points to be visited include: Miami, San Juan (Puerto Rico), New Orleans, Houston, Brownsville, Fort Worth, San Antonio, Los Angeles, San Francisco, Detroit, Windsor (Canada), Chicago, Seattle and other cities near the Canada border.

In addition to establishment of a New York free port for international air travel, subcommittee members also announced they would recommend to their agencies and to Congress a number of reforms, including larger duty-free allowances, simplification of paper work for both airlines and passengers, and elimination of head tax in some cases. All proposals are in line with the facilitation report of the Provisional International Civil Aviation Organization (PICAO).

On their visit to Montreal, the U. S. officials conferred with their Canadian counterparts on standardizing and sim-

plifying procedures for U. S.-Canada air travel and shipments.

Great Britain: International Aeradio Ltd., has been organized in England. The announced purpose is "to install and operate telecommunications and radio aids to navigation throughout the world, wherever they are required and would otherwise not be available." The firm will be similar to Aeronautical Radio Inc. (Arinc), non-profit group of the U. S. airlines. Aeradio was formed by the three government airlines: British Overseas Airways Corp., British European Airways, and British South American Airways. Its chairman will be Whitney Straight, deputy chairman of BEA.

China: CNNRA Air Transport, the recently-organized Chinese air service headed by Maj. Gen. Claire L. Chennault, has purchased at least eight Curtiss-Wright C-46 Commando transports and is having them converted by United Services for Air, Inc., of Niagara Falls, N. Y. The chief purpose of the Chennault company is to fly relief supplies into the interior of China.

U. S. S. R.: The Russians are reported to be building a new twin-engined airline transport for 27 passengers, the Ilyushin-12, which is expected to be put on Soviet civil air services in the near future. It is said the transport will cruise at 200 mph with a range of 1,250 miles. The standard model carries a crew of five.

France: The French aircraft industry is said to have made commercial deliveries of 375 new aircraft totalling over 1,000,000 lbs. in weight during the three months ending Dec. 1, 1946. Most of the aircraft are believed to be personal types. In the same period, the industry delivered 971 aircraft engines.

Canal Zone: Representatives of the State Department, CAA, CAB and the Panama Canal administration conferred in Washington Jan. 20 on proposed changes to ease requirements for flights to and from the Panama Canal Zone, particularly short flights by U. S. private

\$111,500 to Train Pilot

It costs A. B. Aerotransport, the Swedish airline, 400,000 kronor (about \$111,500) to train an airline captain, according to a company statement. ABA trains its own personnel and that of the Scandinavian Airlines System at its air training school in Stockholm. In 1947 about 300 pilots and navigators will complete ABA courses.

For the first year after graduation a pilot is limited to Swedish domestic routes or certain European runs. He may not act as captain during the first winter and must pass special rigid checks to qualify thereafter as captain on winter flights. All pilots—no matter what their experience—must undergo a four to six hour flight check every six months.

flyers crossing the Canal Zone-Panama boundaries.

Australia: The five Convair-240 40-seat transports bought by Trans Australia Airlines, the government company, will be used on the firm's main routes: Melbourne-Sydney-Brisbane; Melbourne-Hobart; Melbourne-Launceston; Melbourne-Adelaide. Contract price for the fleet is 523,000 Australian pounds, about \$1,500,000. Delivery is expected to begin in June, 1947.

Chile: Skyways International, Inc., of Miami reports that it has received from the Chilean Government a five-year contract to operate non-scheduled carriage of passengers, cargo and mail between Miami and Santiago de Chile.

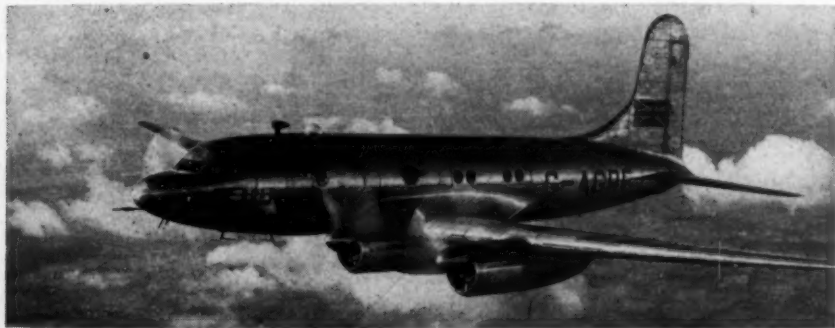
Italy: The U. S.-built airport at Foggia, one of the largest Allied bomber bases in Europe, will be turned over to the Italian Government in the near future, according to a statement by Italian Air Minister Mario Cingolani.

Nicaraguan Airfield: The U. S.-built military airport at Puerto Cabezas, Nicaragua, was turned over to the Nicaraguan Government by U. S. officials on Dec. 14. The airport is one of the largest in Central America.

Argentine Permits Cancelled: Argentina has cancelled all permits for airline radio stations, which will be taken over and operated by the government. Exceptions may be considered in the case of international airlines. Details of the expropriation have not yet been worked out.

Gilbert Heads U. S. Delegation

Glen A. Gilbert, consultant to the Civil Aeronautics Administrator, has been named head of the U. S. delegation to the South Pacific Regional Air Navigation Meeting of PICAO, which will convene Feb. 4 at Melbourne, Australia. This is the fifth regional conference called to consider the specific application of PICAO standards for communications, air traffic control, airports, meteorology, etc. Capt. A. S. Heyward, PICAO coordinator for the Navy Dept., will be U. S. alternate delegate at Melbourne.



BOAC's First Tudor I—BOAC has given the name "Elizabeth of England" to the first Avro Tudor I destined for commercial services. Another Tudor I—the first delivered—is being used for testing and training only.

MANUFACTURERS

Portal Pay Suits Hit Aircraft Industry for Nearly Half Billion

The aircraft manufacturing industry is beset by portal-to-portal pay suits totalling some \$495,804,000 and industry spokesmen have told Congress that prompt action to relieve the threat of disaster is imperative since recognition of the claims would leave the industry unable to meet payrolls or to pay its bills.

E. E. Wilson, chairman of the board, Aircraft Industries Association, testifying before a Senate Judiciary subcommittee, said that without such action, the aircraft industry, backbone of national security, must inevitably succumb.

This is pointed up by figures which Wilson submitted to the committee which show that the total claims are greater than the entire cash securities of the 12 major companies (\$326,799,000.) It is in excess of their entire working capital (\$366,385,000) and it is more than their total net worth (\$423,801,000) representing all of the investment and earnings of the companies.

"The best available calculations thus indicate that no matter how conservative a basis may be employed," Wilson testified, "the aircraft industry faces complete and utter disaster if any portal compensable claims whatsoever are allowed or compromised."

The potential damage is not confined to the aircraft manufacturing industry. Wilson pointed out that of the thousands of hours of employment worked during the war in the production of aircraft, a major portion was accumulated in the plants of subcontractors and small industry. Subcontracting was carried on to a greater extent in the aircraft field than in any other war industry. The AAF estimated that more than 12,000 subcontractors produced under AAF wartime contracts alone.

A compilation of the suits thus far filed against major contractors follows: Firestone Tire and Rubber Co., aviation division, Atlanta, \$750,000; The Glenn L. Martin Co., \$200,000,000 and \$20,000,000 (two suits); Bell Aircraft, Burlington, Vt., \$250,000 and Bell Aircraft, Marietta, Ga., \$4,000,000; Bendix Aviation Corp., Illinois division, \$4,000,000; Wright Aeronautical, Cincinnati, \$52,650,000; Thompson Products and Thompson Aircraft Corp., \$21,960,000; Goodyear Aircraft, Akron, \$7,000,000; Curtiss-Wright Airplane Corp., Columbus, two suits, \$4,000,000 and \$25,000,000; Goodyear Aircraft, Columbus, \$28,500,000; Curtiss-Wright Corp., Columbus, \$1,000,000; Pratt & Whitney, Kansas City, \$1,300,000;

North American, Kansas City, \$563,398; Wright Aeronautical, Newark, \$44,000,000; Curtiss-Wright Buffalo, \$26,000,000; Consolidated Vultee Aircraft Co., Downey, \$6,048,000; Curtiss-Wright, Los Angeles, \$100,800; Timm Aircraft Co., Van Nuys, \$1,410,000; Douglas Aircraft Co., Long Beach, \$12,096,000.

Electric Boat Co. Takes Over Canadair's DC-4M

Electric Boat Co., New York, for over 45 years the largest producers of submarines in the world, is entering the aircraft manufacturing industry by taking over complete production of the four-engined "North Star" DC-4M transport being built at Montreal by Canadair, Ltd., for Trans-Canada Air Lines and the Royal Canadian Air Force.

H. Oliver West, until recently executive v. p. of Boeing Aircraft Co., will be president and general manager of Electric Boat's Canadian subsidiary. The plane is being produced at the plant of Canadair Ltd., which was built at Cartierville airport in Montreal by Canadian Vickers, Ltd., for the Canadian government during the war. About 8,000 workers are now employed in producing additional aircraft.

The North Star is powered by four Rolls-Royce Merlin engines which develop a total of more than 7,000 h. p. The new transport has been jointly created over the past two years by the Canadian government and Douglas Aircraft.

Navion Price Raised to \$7,750, including Accessories Requested

An increase in the price of the four-place Navion to \$7,750 fly-away Los Angeles was announced by North American Aviation at a factory dealer meeting. Previous price was \$6,100 for a contact model. The new \$7,750 price includes radio, instrument flying

AAF Cautions Against Shrinking Airpower; Received 1010 Planes

Procurement of military planes has fallen off to such an extent that AAF officials, noting that only 1,010 military aircraft were delivered to the Air Forces last year, cautioned against allowing American airpower to shrink to the low pre-war levels.

The AAF procured more than 30,000 planes in 1945, compared with peak acceptances in 1944 when all-out warfare required approximately 70,000 military aircraft.

Deliveries in 1946 were topped by 453 fighter planes, of which more than 450 were powered by jet units, pointing up AAF emphasis on jet propulsion. Lockheed with 405 P-80 Shooting Stars was the principal supplier of jets. Bell delivered two P-59's and one P-83; Northrop one P-79, and Republic two P-84's. Planes with conventional reciprocating engines included five Northrop P-61's; 19 North American P-82's; four Republic P-47's and 14 Bell P-63's.

Of the 63 bombers delivered to the AAF, Boeing supplied 62 B-29 Superfortresses and Douglas an A-26 light bomber. Northrop delivered 19 photographic planes of the F-15A type. Fairchild supplied 76 Packet C-82's; Douglas two C-54's and two C-74's and Lockheed one C-69. Boeing produced one experimental model transport for delivery. The rest of the 1946 total consisted of 60 communications type aircraft and 329 special purpose airplanes. Fifteen gliders also were delivered.

12 Firms Ship 31,594 Personal Planes in '46

Twelve manufacturers reporting to the Personal Aircraft Council of the Aircraft Industries Association shipped 31,594 personal airplanes last year with a manufacturers net billing price total of \$88,172,000.

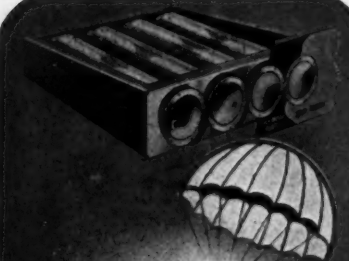
Despite a greatly shortened work-

day month because of holiday shutdowns, the December shipments totaled 1,891, with a manufacturer's net billing value of \$6,054,000. The same companies shipped in November 2,812 aircraft, valued at \$8,190,000.

Production data by individual companies follows:

Company	Complete Aircraft Shipments			Value-Manufacturer's Net Billing Price (in thousands)		
	December	November	January-December	December	November	January-December
Aerocraft	231	717	7,555	\$ 446	\$1,378	\$13,571
Beech	10	30	299	713	1,297	18,701
Bellanca	60	88	288	300	328	1,418
Cessna	439	545	3,289	953	1,271	9,171
Engineering & Research	N.A.	N.A.	3,503a	N.A.	N.A.	6,487a
Funk	13	18	176	48	67	820
Globe	N.A.	(23)d	1,054b	N.A.	(322)d	3,788b
Lucas	170	312	2,490	468	727	8,908
North American	82	39	148	821	260	920
Piper	883	670	7,780	1,281	1,358	13,508
Republic	45	54	196	216	257	893
Stinson	237	288	1,436	972	948	8,990
Taylorcraft	32	68	3,181	79	178	1,974
Texas Engineering & Manufacturing Co.	19	49	863	87	138	1,074
TOTAL	1,891	2,812	31,594	\$6,054	\$8,190	\$88,172

N.A. Not available. a Five month period. b January-November only. c Fairchild Personal Planes. d Not included in total.



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Douglas European Division Aids Parts Procurement

A European division to provide technical liaison with overseas airlines and to expedite their procurement of spare parts has been established by Douglas Aircraft Co.

The European office, located at Haren Airdrome, Brussels, is headed by M. E. Oliveau, formerly administrative assistant to A. E. Raymond, vice president in charge of engineering. W. A. Spencer, former supervisor of field service for the Eastern territory, will head the customer service group permanently established in the European area, and Wayne Shelley, former assistant part sales manager, will head part sales at Brussels.

Of 4500 Douglas transports, including war surplus C-47's and C-54's, in service outside the United States, a large majority are operated by European airlines and the new division will greatly increase serviceability of the large fleet of Douglas planes on the continent.

A stock of DC-3 and DC-4 parts sufficient for emergency maintenance and repairs, with the exception of engines, propellers and radio equipment, will be available at Brussels. When the new Douglas DC-6 enters European service, DC-6 parts also will be stocked.

Long Range Connie Ready Soon

A long range version of the Lockheed Constellation will be ready soon for flight tests. The new Model 749 is similar to the "Gold Plate" 649, except that the outer wing sections have been replaced with panels which will carry extra fuel tanks.

Model 649. The day version will accommodate 64 passengers; a combination sleeper and sit-up version will provide for 48 passengers.

Martin Trains Personnel for 202

Training of about 1,000 mechanics, maintenance men and pilots who will fly and service the Martin 202 twin-engined transports has begun in a service training school at the Glenn L. Martin Co., Middle River, Md.

Classes started in mid-January, with men from Northwest Airlines, Eastern Air Lines and Linea Area Nacional of Chile making up the first group of trainees.

New Export License Rule Pending

The requirement for an export license on small civil aircraft probably will be lifted shortly. While unlicensed export of personal planes and parts will be permitted under a proclamation now being prepared planes having an empty weight in excess of 35,000 pounds will still be controlled.

T. G. Henning Expands Engine Accessories Service

Expansion of the T. G. Henning Co. is announced in conjunction with the opening of its offices and warehouses at a new location at 7550 Melrose Ave., Los Angeles.

T. G. Henning, head of the company which engages in the brokerage of aircraft engine accessories, has appointed



Henning

John S. Cranford, formerly with the Lockheed Aircraft Corp., as sales manager, and Jack Wolf, formerly with the Airsupply Co., as service engineer. Both Cranford and Wolf have had

wide experience in the aircraft industry and possess technical backgrounds.

Henning established his company in Los Angeles about a year and a half ago and specializes in surplus aircraft engine accessories and all component parts, including propellers. In establishing the new offices and warehouse, the company plans to extend its activities, especially in the foreign field. The company's cable address is Henair, Los Angeles.

Manufacturing Personnel

Eugene W. Norris, chief engineer for Luscombe Aircraft Corp., has been appointed vice president in charge of engineering. James P. Cunningham, v. p.-production, has been advanced to vice-president of Luscombe.

Bert Holloway, with Lockheed Aircraft Corp. for six years handling publicity, advertising and sales promotion, is new sales development manager, succeeding Roy Campbell, Jr., who resigned to join the Chicago office of Foote, Cone & Belding advertising agency. The promotion places Holloway in charge of Lockheed advertising, publicity, sales promotion, and market research.



McElligott



Flickinger

Ford C. McElligott, advertising manager, Airquipment Co., Burbank, Calif., has been promoted to sales and advertising manager, in line with company expansion plans.

Harrison W. Flickinger, vice president of Republic Aviation Corp., has been appointed Washington representative for Republic with temporary headquarters at Wardman Park Hotel.

Don R. Berlin has been elected vice president in charge of aircraft contracts and engineering for McDonnell Aircraft Corp.

AMERICAN AVIATION

Continental Blames Carelessness

"Careless workmanship, a don't care attitude and habitual absent-mindedness by some of our employees" were responsible for a big share of the losses of the Continental Motors Corp. of Muskegon, Mich., suppliers of 90% of the engines used in personal aircraft, C. J. Reese, president, told company employees in a recent letter.

Though plenty of orders are on hand for 1947 production, it is costing Continental several dollars more per engine than they can get from buyers, Reese said. Alternatives Reese presented were: price raises; stoppage by employees of machine mismanagement and careless work; employee concentration on cutting down scrap losses; or subcontracting a large share of Continental's orders and thus reduce its working forces.

Industry Notes

'Copter Instruments: New and more efficient designs for helicopter instruments will aid in opening untapped fields of flying, according to C. F. Savage and R. G. Jewell, of the Aeronautical Instrument Engineering Division of General Electric. They discussed special instruments for rotor-craft and the necessity for their development at a recent A.S.M.E. meeting in New York.

New C-W Contract: Curtiss-Wright Airplane Division has been awarded a contract to overhaul 74 Navy R4D Douglas twin-engine transport planes. Nearly \$3,500,000 is involved in the agreement, which will give employment to 300 additional persons.

Stratos Delivers: Stratos Corp. has started deliveries on their \$2,000,000 contract for aircraft air conditioning and pressurizing equipment for The Glenn L. Martin Co. The contract award was made six months ago. The units will be installed in Martin 3-O-3 transports.

Grumman Lay-Off: The Navy contract for F-7-F twin engine fighter planes has been completed by Grumman necessitating the lay-off of 950 workers. Company officials said no further lay-offs are contemplated at present and that work is continuing on the F-8-F, the Widgeon, and Mallard amphibian planes for private and executive use, and on aluminum canoes and truck bodies.

Helicopters Winterized: Bell Aircraft has delivered two YR-13A helicopters completely winterized for use in cold climates. They were shipped aboard a C-82 Packet to Ladd Field, Fairbanks, Alaska, where they will be tested to determine the suitability of rotary wing aircraft for Army Ground Forces use under all types of atmospheric conditions.

Cessna Seaplane: The new Cessna 120-140 models have been given CAA approval as seaplanes with Edo Model 1650 floats. The floats, with new design features are adaptable both to the Cessna 120, standard side by-side utility version and the 140 deluxe model.

Financial Comment

by
I. W. Burnham, II

of
Burnham & Company
Members of New York Stock Exchange

During the first half of 1946 the airlines had an insatiable appetite for additional capital which was to have been used to pay for the sizable orders then under contract for new equipment. During the latter half of the year the demand for funds, which was largely unsatisfied by earlier financing, remained, but was needed not so much to pay for new equipment, but to maintain working capital which had been sorely depleted by operating losses of most of the carriers. During recent weeks several of the major airlines have, for the time being at least, solved their financial problem by arranging for new capital. Eastern Airlines has established a \$20 million revolving credit with 27 New York banks; Delta has arranged a \$5 million loan with 17 Southern banks; TWA has received a \$10 million loan from the Hughes Tool Company; while TACA has been saved from financial chaos through a \$1 million loan provided by Waterman Airlines, Pennroad Corporation and several other interests. Braniff stockholders have under consideration a loan of \$10 million; United

Air Lines has announced that it is filing with the SEC for a \$10 million issue of convertible preferred stock; and Western Air Lines will raise additional capital through the sale of common stock. Colonial Airlines has apparently made little progress in its plan to raise capital through the sale of additional common stock, apparently because of the low quotation for its equity.

All of this adds up to the conclusion that despite the great concentration of unfavorable airline news in recent weeks, the credit of many carriers is still in good condition and there are people willing to invest new money at this time. While current conditions are not good, the outlook is not quite so bleak, and with improved weather, traffic, load factors and profits should rise considerably from current low levels.

8 Banks Participate in WAL Loan

An amended registration statement filed with SEC by Western Air Lines states that the company is arranging a \$7,500,000 loan with the Chase National Bank, and that the following banks will participate: Bank of America, Crocker First National Bank of San Francisco, New York Trust Co., Seattle-First National Bank, Security-First National Bank of Los Angeles, Trademans National Bank and Trust Co. of Philadelphia, and United States National Bank of Denver.

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UAL Plans \$49,500,000 Financing; Expansion To Total \$85 Million

A program calling for approximately \$49,500,000 of new financing has been announced by W. A. Patterson, president of United Air Lines, who said the proceeds will be joined with reserves already built up to defray costs of the postwar expansion program which will total about \$85,165,000.

The new financing program includes issuance of \$12,000,000 par value, 20-year sinking fund, 3½% debentures to be placed privately with insurance companies. Offering will be made to common stockholders of 94,773 shares of cumulative preferred stock, \$100 par value, which will be underwritten by a group of investment bankers headed by Harriman Ripley & Co. This stock will be convertible into common. Dividend rate and conversion price will be determined later. A \$28,000,000 term loan will be arranged with a group of more than 30 banks headed by the National City Bank of New York.

Currently United has 1,848,087 shares of common stock and 39,150 shares of management stock outstanding.

A registration statement filed with the Securities and Exchange commission shows that the expansion program will include \$58,456,000 for new flight equipment; \$22,517,000 for new ground facilities; \$425,000 for ground communications equipment, and \$3,767,000 for miscellaneous purposes.

Stock Purchase Program Set for Braniff Directors

A stock purchase plan for members of Braniff Airways' executive committee of the board of directors was approved by company stockholders at a special meeting last month. T. E. Braniff, president, Charles E. Beard, executive vice president, R. C. Shrader, vice president, C. G. Adams, secretary-treasurer, and Hal C. Thurman, general counsel, were granted the right to buy a designated number of common shares during the next five years at the market price of Jan. 9, 1947.

A total of 45,000 shares is involved, with Braniff allocated 25,000 and the others 5,000 each.

Braniff indicated that a purchase plan for employees is now being formulated for presentation at the regular annual meeting in April.

Action at the meeting empowered Braniff, Beard, Shrader, and Adams with complete legal authorities as required by various Latin American countries for the development of the company's routes into Mexico, Cuba, Central and South America.

Consideration of a proposed \$10,000,000 flight equipment loan was postponed, pending completion of technical SEC requirements.

Leading Aviation Securities

(Courtesy of Burnham & Co.)

	1946-47	Range for 6 Days Ended 1-10-47	Range for 6 Days Ended 1-17-47	Two Weeks Not Given
	High	Low	High	Low

NEW YORK STOCK EXCHANGE

AIRLINES				
American Airlines	197½	8½	10	9½
American Airlines, cv. pl.	74½	57½	72	71
Braniff Airways	34½	9½	13½	11½
Eastern Air Lines	31½	16½	18½	18½
National Airlines	34½	13	16½	16½
Northwest Airlines	86½	17	21½	18½
Pan American Airways	27	11½	13½	12½
Penn-Central Air	48½	12½	18½	13½
Trans. & Western Air	71	17½	22½	20½
United Air Lines	54½	19½	23½	23½
Western Air Lines	38	7½	10½	9½

MANUFACTURERS, ETC.

Aviation Corp.	14½	6½	7	6½
Aviation Corp., pl.	83½	41	43½	44
Boech Aircraft	30½	11½	11	10½
Boell Aircraft	38½	18½	18½	18½
Bendix Aviation	58	38½	38	36½
Boeing	38	17½	22½	19½
Cons. Vultee	23½	14½	18½	16½
Continental Motors	24	9½	10½	10
Curtiss-Wright	13½	8½	8½	8½
Curtiss-Wright "A"	34½	17½	19½	19½
Douglas Aircraft	108½	63½	78	72
Grumman Air. Eng.	45½	28	28	28
Lockheed Aircraft	45½	18½	19½	17½
Martin, Glenn L.	48½	31	34	33
National Aviation	28½	13½	18½	18½
North Am. Aviation	16½	8½	8½	8½
Republic Aviation	24½	7½	9½	8½
Spartan Corp.	40½	18½	20½	20½
United Aircraft	37½	18½	18½	17½
Wright Aero.	108	78½		

NEW YORK CURB EXCHANGE

AIRLINES				
Alaska Airlines	12	3½	4½	4½
Colonial Airlines	43	9	11½	10½
Northeast Airlines	21½	6½	7½	6½
Pan American Air. war.	14	2½	3½	3

MANUFACTURERS, ETC.

Aeronautical Products	5	2½	3	3
Aero Supply	7½	2½	3½	3½
Air Associates	23½	10½	11	11½
Air Investors	8½	3½	4	
Air Investors, cv. pl.	38	38		
Airmen Mfg.	22½	6½	8½	7½
Airon Mfg. pl.	27½	11½	12½	12½
Aro Equip.	9½	3½	3½	3½
Bellanca Aircraft	17½	17½	17½	16½
Bronco Corp.	5½	4	4½	4½
Brewster Aero	10½	4	4½	4½
Cessna Aircraft	17½	7½	8½	8½
Fairchild C. & I.	13½	6	6½	6½
Fairchild E. & A.	8½	3½	3½	3
Irving Air Chute	18½	7½	8½	8½
Monaco Mfg.	18½	8½	8½	8½
Northrop Aircraft	18½	7½	8½	8½
Piper Aircraft	18½	8½	8½	8½
Roosevelt Field	10½	4½	5½	5½
Ryan Aero.	10½	8½	8½	8½
Solar Aircraft	29½	12½	13½	14
United Aircraft Prod.	8	8½	8½	8½
Waco Aircraft	8½	3½	3½	3½

OVER-THE-COUNTER SECURITIES

AIRLINES				
	January 10, 1947	January 17, 1947		
	Bid	Asked	Bid	Asked
Airborne Cargo Lines	1½	1½	1	1½
Air Cargo Transport	1½	1½	1	1½
All American Aviation	4½	4½	3½	4½
American Overseas Airlines	8½	8½	7½	8½
Chicago & Southern Air Lines	7½	7½	7½	7½
Continental Air Lines	8½	8½	7½	8½
Delta Air Lines	20	21	19	20
Emory Air Freight Corp.	9	9½	8	9½
Expresso Aero	2½	2½	2½	2½
Flamingo Air Services, Inc.	2½	2½	2½	2½
Great Circle Airways, Inc.	1	1	1	1
Inland Airlines	1	1½	1	1½
International Airlines, Inc.	1	1	1	1
Island Air Ferries, Inc.	1	1	1	1
Latin American Airways, Inc.	1	1	1	1
Mid-Continent Air Lines	1	1	1	1
National Skyways Freight Corp.	1	1	1	1
TACA Airways	1	1	1	1
Trans Caribbean Air	1	1	1	1
U. S. Airlines, Inc.	1	1	1	1

MANUFACTURERS, ETC.

Aeronautical Products	5½	5½	5	5
Aerona	1	1	1	1
Aircraft & Diesel	1	1	1	1
Airplane & Marine	1	1	1	1
Central Airports	1	1	1	1
Columbia Aircraft	1	1	1	1
Continental Aviation	1	1	1	1
General Aviation Equip.	1	1	1	1
Glauden Products	1	1	1	1
Globe Aircraft	1	1	1	1
Harlow Aircraft	1	1	1	1
Harvill Corp.	1	1	1	1
Interstate Aircraft & Eng.	1	1	1	1
Kellett Aircraft	1	1	1	1
Loar, Inc.	1	1	1	1
Liberty Aircraft	1	1	1	1
Lucas Aircraft	1	1	1	1
McDonnell Aircraft Corp.	1	1	1	1
McDonnell Aircraft Corp., pl.	1	1	1	1
Pacific Airline	1	1	1	1
Pellak Mfg.	1	1	1	1
Standard-Thomson Corp.	1	1	1	1
Taylorcraft	1	1	1	1
Timm Aircraft	1	1	1	1

Operations and Maintenance Review

Including

COMMUNICATIONS—NEW EQUIPMENT—GROUND FACILITIES

From Seats to Shaving

Long-Haul Air Traveler Seen as Forgotten Man of Those Who Plan 'Luxury' Airliners

By WAYNE W. PARRISH

Mr. Albert P. Elebash is one man we hope to meet one of these days right soon.

We've got a lot to talk about. Judging from his paper he delivered early in December at the SAE National Air Transport Engineering Meeting, we're going to hit it off swell.

Mr. Elebash is division engineer for Pan American Atlantic Division. But he's much more than that. He is one engineer who's thinking about the customer who has to sit long hours in these so-called deluxe air giants that whisk one across oceans and continents in that luxurious comfort which ad writers love to rave about.

After reading Mr. Elebash's paper, we know he hasn't any illusions about today's long-haul air comforts. He must have made a long flight somewhere. We know one thing for sure: the aircraft designers and engineers who put these airplanes together have never had to make a long trip in one of their contraptions. If they did, they'd go jump in a lake. What we want to do now is to sit in front of a fireplace with Mr. Elebash and think up all the long air trips we can sentence some of these engineers to take. It'll teach 'em a lesson.

"With lower fares the average man is flying; thus, there may be less and less demand for full luxury," Mr. Elebash said in his paper. "We must not, however, confuse actual necessities that may not have been used in the past with so-called luxuries."

Comfortable Seat Needed

These are sound words. Today's air passengers don't want or need luxurious staterooms, plush trimmings and all that sort of thing. But as Mr. Elebash said so aptly, "actual necessities" is something else again. And we aren't thinking of trips of up to 24 hours in duration. We're thinking of those through flights which extend from 24 hours on up to 60 and sometimes they take even longer despite the ad writers.

The greatest need of all, Mr. Elebash says, is a comfortable seat. And how! Twenty-four hours can be endured, perhaps, but not more than that in one of these typically inelastic seats with which most aircraft are equipped. And, he says, a foot rest is needed. Agreed! It seems absurd, but there just aren't any foot rests.

They're needed not only for a back-stop but to get away from that eternally fatiguing floor vibration which becomes one of the major causes of insanity above 20 hours of flying.

Which reminds us that Scandinavian Airlines System is experimenting with a seat that not only reclines but has an extension under the seat which pulls out and affords the nearest thing to a full reclining position. More power to the Scandinavians. It shouldn't be such a hard job to develop such a seat without adding materially to weight. But it does take common sense and initiative on the part of somebody.

Better Lavatories and Galleys

Mr. Elebash also told the SAE about the need of better planning for lavatories and galleys.

"Taking a quick look at our passengers, we find that in the past the average air traveller was in pretty good health and could stand a rather strenuous and tiring trip," he said. "Relatively few children were carried; practically no invalids; and passenger loads were largely males. This status has changed. Air travel today is an accepted form of travel. Prices are coming down, and we can expect to carry the same variety of people as are traveling by rail.

"In a plane load of 50 passengers we can expect to have: two or three children, a baby or two, one or two very aged people, several with heart trouble, possibly a bed patient, numerous people with colds or sinus trouble, two or three of very low socio-economic status, a movie actress, a drunk, an engineer, an obnoxious character or two. Crowd these into a cabin with the same floor area as a large living room, stir well, and apply heat—it is a matter of time before something happens."

We trust Mr. Elebash wasn't implying that it would be the engineer on board who started causing trouble, but seriously, he sized up the situation perfectly. What he didn't say was: "And keep them all together on a 40 to 60 hour trip."

It is a certainty that the present single-cabin American long-range transports weren't designed for long-haul passenger traffic. For an hour or two, and on up the scale to a dozen or 15 hours, the aircraft are satisfactory. But start prowling around the globe, with time changes, climate

changes, food changes and all the rest, then is when we need more engineers like Albert P. Elebash to plan passenger facilities.

Not long ago we made a flight from Cairo on an American carrier in a converted C-54. It was one of those 40-hour flights that somehow takes 60 hours elapsed time. The aeronautical engineers had thought of everything to keep the airplane operating smoothly, but somebody forgot the customer.

We don't mention the cockroach that squeezed through the cockpit door into the cabin and paraded in all his glory before the passengers, although we had thought that an airplane was one place where we wouldn't find those ugly pests.

The Art of Shaving

But we would like to mention the joys of shaving and freshening as per those wonderful ads in the national magazines. After all, one doesn't like to arrive at New York customs and immigration looking like a member of the Lost Patrol.

It's quite a far piece down the road from Cairo to a point in the Atlantic about two hours out of Gander. It seemed the right time for a shave, to say nothing about needing one. So we hops back to the steward and inquire about an electric shaver. Nope, it's disappeared. Probably some Arab stole it in Cairo. But we prefer our own safety razor anyway.

So into the so-called men's room. What a mess! The reason for a filthy wash basin became evident when no water came out of the tap. We were then told that there were no "facilities"—whatever they are—for filling the water tank between Cairo or Athens, and Gander. (Intermediate stops had been Rome, Madrid, Lisbon and Shannon). So, no water.

Hope Eternal

The steward then heated a can of drinking water and cleaned the basin to a moderately adequate extent. We still had high hopes. But taking off our coat, there was no hook anywhere to be found, recessed or otherwise. "No sir, they just forgot to put in a coat hook I guess," the steward said. So we used the top of the toilet seat as best we could. Then there was no place to put our pair of glasses—nowhere at all. And the razor and jar of shaving cream kept vibrating to the floor, and all the time we had to hold on to that precious can of hot water because there wasn't any place to put it except a filthy floor.

But the climax is yet to come. The stopper in the basin wouldn't work. It kept popping up. It wouldn't stay

down under any circumstance. Naturally the water ran out as fast as it was poured in.

Never mind, we got that shave by the most amazing dexterity and maneuvering we've ever performed, and with less water than was ever used for shaving before. Better than nothing. But we might say that the men's room was equal to or worse than the day coach lavatory on a Pennsylvania Railroad week-end excursion train by the time some of the other passengers, too, had endeavored to freshen up.

The guy who "forgot" to put a coat hook in a men's lavatory should be consigned to flying the rest of his days on one of Central African Airways' six-passenger converted Avro Anson trainers. (That's the worst we can think of.)

Mr. Elebash might have placed more emphasis on lavatory equipment. Facts of nature are often relegated to the background as being unpleasant, but they are very real nonetheless. The Army had a very practical system for urinals, and we would recommend them for commercial planes. The only possible planning which aeronautical engineers have done to date is to make sure that the acid of urine won't eat up the metal or plastics on the toilet seats; they certainly never gave a thought to sanitation. The arrangements in almost all modern aircraft are disgustingly and inexcusably primitive and unsanitary—up to, but no higher than, prewar day coach standards.

First Navy GCA Fatality

First fatality to occur in a Navy GCA-controlled operational landing was on Jan. 20 when a Navy nurse was killed in the crackup of a hospital plane at fogbound Oakland, Calif., airport. Navy was quick to announce that the GCA had been "working perfectly" and that the crash was attributable to pilot error.

Navy records on use of GCA show that more than 76,750 approaches and landings of all types, training and operational, have been made by Navy pilots under the direction of "talk-down" operators since the first set was installed at Whidbey Island, Wash., in May, 1945.

Most of these were training operations, but 19,745 were operational landings, of which 1,144 were made under instrument flight conditions and more than 75 were under zero-zero conditions.

The passenger fares are deluxe. Operationally, the airlines are good. But from the standpoint of passenger comforts—essentials, not luxuries, as Mr. Elebash said—the airlines are in the 10c-store business. Too many aerodynamic engineers have tried to handle aircraft design problems pertaining to the human being enduring a 40 to 60 hour trip. Travelers should want to go by air for more reasons than their being in a hurry. As it stands now, the time element or the innocence of a first long-haul trip must stand as the dominant factor.

PAA, Three Foreign Lines Join Aeronautical Radio

Pan American Airways and three foreign airlines were approved for membership in Aeronautical Radio, Inc., at recent annual meeting of stockholders and directors in Washington. Foreign lines whose applications were approved were KLM, A. B. Aerotransport, and Qantas Empire Airways.

Directors elected D. W. Rentzel to another term as president, and also reelected G. A. O'Reilly, vice president and secretary; F. C. Dyer and R. O. Smith, vice presidents, and L. E. Davis, treasurer.

Board membership for the coming year is comprised of Waldo Lynch, Pan American; M. H. Anderson, Northeast; J. H. Carmichael, PCA; Emory S. Land, ATA; E. D. Ennes, National; K. R. Ferguson, Northwest; L. G. Fritz, American; C. N. James, Western; R. C. Shrader, Braniff; L. T. Campbell, Delta; J. A. Young, Chicago & Southern; D. C. McRae, Eastern; J. R. Cunningham, United; Paul Goldsborough, TWA; and D. W. Rentzel.

Pilots Must Carry Licenses

Civil Air Regulations have been amended effective February 15, 1947, to require that a valid pilot certificate must be in the personal possession of all pilots while piloting aircraft. Heretofore, it has not been required that certificates be carried in the pilot's possession.

Airlines Favor Long-Range DC-6 Version

Airline demands for the long-range version of the Douglas DC-6 have been sufficiently great that it now appears that a majority of orders have been changed to specify the long-range rather than the standard DC-6. It also appears that there may be sufficient demand for a medium range job to justify development of a model carrying approximately 3300 gallons of fuel, compared with 2577 in the standard and 4201 in the long range model.

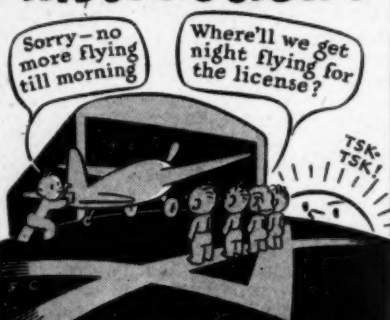
The long-range version, which was not contemplated in original designs and was developed when it appeared that a number of purchasers wanted the plane primarily for over-water and transcontinental operations, differs from the standard model primarily in the size and arrangement of fuel tanks. Resultant differences in other features of the plane, compared with the standard model, are as follows (all omitted specifications being identical):

	Standard Model	Long Range
Max. take-off weight	84,000 lbs.	93,200 lbs.
Empty Weight	48,875 lbs.	48,789 lbs.
Passenger Maximum	52-68 (26 sleeper)	50 (26 sleeper)
Cargo in addition to passengers	518-551 cu. ft. or 7240 lbs.	460 cu. ft. or 6440 lbs.
Fuel capacity	2577 gal.	4201 gal.
Oil capacity	128 gal.	178 gal.
Payload at 1,000 miles	*14,280 to 17,410 lbs.	*13,350 lbs.
Payload at 1,500 miles	*14,280 to 16,700 lbs.	*13,350 lbs.
Payload at 2,500 miles	**11,500 lbs.	**13,350 lbs.
Service ceiling, all eng. at max. T. O. wt.	26,300 ft.	23,900 ft.
Climb rate, all eng. rated power-S.L. at max. T.O. wt.	1,320 fpm	1,100 fpm
Climb rate, one eng. inoperative rated power S.L. at max. T.O. wt.	780 fpm	610 fpm
Takeoff, to 50 ft. hgt. S.L. at TO. gross wt.	4030 ft.	5170 ft.

*Capacity payload=170 lbs. per passenger plus 5 lbs. per passenger in cockpit plus 10 lbs. per cubic foot cargo space.

**Long Range Operation=1.1 V L/D Max. (other range payload specifications at 60% S.L. rated power).

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New Weather Minimums and Instrument Rules Establish Uniformity, Erase Pilot Discretion

With pointed reference to the number of recent accidents which have occurred during low approaches in bad weather, both the Civil Aeronautics Board and the Civil Aeronautics Administration, have taken steps to re-evaluate existing weather minimums and to require stricter adherence on the part of pilots to regulations regarding instrument approaches.

The CAB action, published as an emergency amendment to Civil Air Regulations (Section 61.752) and made effective immediately, carries the following wording:

"No instrument approach procedure shall be executed or landing made at an airport when the latest U. S. Weather Bureau weather report for that airport indicates the ceiling or visibility to be less than that prescribed by the Administrator for landing at such airport."

Effect is to remove the latitude which heretofore has been granted pilots wishing to make landings during marginal weather conditions. The CAB explained that only 25% of official weather reports, during marginal conditions, give an actually measured ceiling (generally by means of a triangulated light beam projected against the cloud base). This lack of accurate, up-to-date data in advance of an attempted landing, coupled with the discretion which has been allowed pilots during marginal weather has, according to CAB, made "the enforcement of minimums impossible, for all practical purposes."

The amended regulation establishes a uniform procedure, without pilot discretion, by providing that whenever the official weather report indicates that either ceiling or visibility is below established minimums, all except emergency landings are prohibited.

Higher Ceiling, Visibility Rules

Following publication of the amended regulation, the CAA announced that it plans to establish new and higher ceiling and visibility minimums, particularly for four-engine equipment, upon completion of a survey which all CAA regional offices have been directed to make. Lower minimums will be allowed in most cases for straight-in approaches than for standard turning approaches.

"Ceiling minimums shall be high enough," the CAA advised its regional administrators, "to permit all turns necessary to reach a position for a normal approach to any runway to be executed clear of clouds and at least 300 feet above all obstructions in the area over which such turns are accomplished. In no case shall this ceiling minimum be less than 500 feet above the established elevation of the airport. Such areas should normally extend two miles from the boundary of the airport, but not include areas over which flight is prohibited nor

areas containing prominent obstructions which can easily be seen and avoided."

Visibility minimums will be at least one and one-half miles, and a higher minimum may be required at airport areas with unusual terrain features or obstructions.

In making special provision for straight-in approaches, CAA states that a lower minimum than for regular approaches may be established when a rate of descent not greater than 500 feet per minute and speed not less than 120 mph in still air will bring the plane from its final approach altitude over the navigational facility to near the end of the runway at zero altitude without change of direction of more than 30 degrees. Ceiling minimum will be at least 400 feet, and visibility at least one mile.

Although the CAB action in requiring stricter adherence to weather minimums has affected domestic airline operating practices, it is not expected that the CAA's proposed action to revise the minimums will be markedly felt. The airlines, through the Air Transport Association, have already studied the situation and raised minimums comparably to the CAA proposals at most airports into which four engine equipment is being operated.

More Radar to Aid New York Airways

The New York-Washington airway, already set up with three separate lanes to handle more traffic and getting GCA at both ends, will be further improved in the near future with installation of long-range search radar at both New York and Washington. This equipment is expected to make possible the plotting and controlling of all aircraft enroute between the two cities, plus improved weather forecasting through radar detection of moving storm patterns.

The radar units, micro-wave early warning (MEW) and the TPS-10 "Little Abner" height finder, are being offered by the Army Air Forces, modified and installed primarily by the airplanes, and will be operated and maintained by the CAA. The City of New York also is participating in the joint project by providing a site on the grounds of Queens College three miles from La Guardia Field and assuming certain construction costs at the site. Considerable work toward modification of the equipment has already been accomplished by Airborne Instruments Laboratory, Inc., at Mineola, Long Island, N. Y.

Mounted on high steel towers, the powerful MEW search radar and associated height finder is capable of spotting all aircraft up to a distance as great as 200 miles from the airport. Information is remoted to scopes in CAA traffic control centers to give controllers an exact picture of the position and altitude of all aircraft flying in the area and approaching and leaving all major airports in the area. The overlapping range of equipment at Washington and New York is expected to permit a new degree of safety in airway traffic control.

The new equipment should be in use between mid-February and early April.

Warner Sees Low Visibility Problem Over in 4-12 Years

Elimination of airline cancellations, delays and diversions due to low visibility will be accomplished in a minimum of four years and a maximum of 12, Edward Warner, president of the Provisional International Civil Aviation Organization's Interim Council, said in a recent lecture at McGill University, Montreal.

He also predicted that in 1951 traffic on international and domestic airlines "will be little more than double" that of 1946.

In 1946, international and domestic lines performed about 9,000 million passenger-miles, 60,000,000 mail ton-miles and 80,000,000 cargo ton-miles, he said. Nearly 500,000,000 miles were flown by about 100 companies, of which two-thirds flew internationally.

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One-Man GCA Set May Sell Under \$100,000

Gilfillan Brothers, Inc., in giving the first public demonstration recently of its new one-man GCA set, said that the equipment can be in quantity production for commercial use by November of this year. It was also announced that the set, exclusive of cabling but complete as to field and control tower equipment, probably will sell for under \$100,000.

The compact console of the new set, similar to those being offered by the Army for use at New York, Washington and Chicago, has two 12-inch scopes; one for scanning a 30-mile radius around the airport, and the other for directing incoming pilots on final approach from six miles out to the end of the runway. The latter scope gives a three-dimensional picture showing elevation, azimuth and range to within plus or minus 10 feet.

Although designed for operation by one controller, two men at the console are reported able to bring in a plane every 30 seconds contrasted with the two-minute landing interval when operated by one man.



One-Man GCA by Gilfillan

CAB Plans Easing of Rules For Helicopter Operations

In a move which would make possible the operation of helicopters at lower altitudes than conventional aircraft, the Civil Aeronautics Board's Safety Bureau is circulating throughout the aviation industry for comment, proposed amendments to part 60 of the Civil Air Regulations.

Part 60.107, which states that aircraft (and which now includes helicopters) may be flown over such areas or open-air assemblies at sufficient altitude to permit emergency landings, but in no case at less than 1,000 ft., would be amended to state that helicopters may be flown over such areas at less than these minimums whenever the flight path over such areas is such that an emergency landing can be effected without undue hazard to persons and property on the ground.

Outside of control areas and control zones, helicopters would be permitted to fly at less than 700 ft. with visibility of less than one mile if operated at a reduced speed, giving the pilot opportunity to see and avoid other traffic or obstacles in time to avoid collision. The present part 60.202 states that aircraft shall not fly at less than 700 ft. unless visibility is at least one mile.

Comments should be forwarded to the Safety Bureau by Feb. 20.

Hurricane Proof Hangar Ready for EAL at Miami

A recent dedication program at Miami International Airport marked the virtual completion of a three million dollar expansion program undertaken by Eastern Air Lines to provide full overhaul and maintenance facilities for Eastern's 70-plane fleet. It gives the company 340,000 sq. ft. of space, housed in 20 separate buildings, and is approximately five times the size of facilities occupied a year ago.

Biggest structure in the completed plant is a \$750,000 hurricane proof hangar for maintaining Eastern's DC-3's, DC-4's and the 14 "gold plate" Constellations to be placed in service this year. The all-steel hangar is 200 feet square and 50 feet high, and has an adjoining 100 by 200-foot shop structure housing hydraulic, electrical and instrument departments.

American Plans New Hangars

American Airlines has started construction of a new twin-hangar on the north side of Chicago Municipal Airport, and has received CPA approval for construction of a similar hangar at Newark where it has been sharing the Brewster hangar.

Designs for the Chicago structure call for twin reinforced concrete hangars, each 257 feet wide, 175 feet deep and 65 feet high, with a 620 ft. three-story shop and office building on one side and a two-story office building on the other side. The combined hangar, costing an estimated \$2,500,000, will be large enough to hold six 4-engined and four 2-engined planes.

Philippines to Get Airways Aids

Chandler Griggs, airways engineer, will open the Civil Aeronautics Administration's first office in the Philippine Islands early in 1947. He has been assigned to help the Philippine government in its reinstallation of airways aids under the Philippine Rehabilitation Act. The aids to be installed are primarily for the use of trans-oceanic hops by American flag lines.

UAL Shop Wins Safety Award

An award for the safety record of United Air Lines' New York maintenance shops has been presented to UAL safety director Jack Curtis. United was winner in the Greater New York Safety Council's industrial accident prevention contest.



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A Constellation will return approximately \$2,600 a day if kept in the air ten hours daily with normal load, but will pay off only \$179 if operating time drops to six hours. We have this from R. W. Lahners of TWA, who was talking about the advantages of a new quick-change power unit for the Constellation.

Lahners said that a study of the operation of a fleet of 10 Connies (TWA's) indicates that 36% of cancelled flights are due to power unit troubles, and that one-fourth of all cancellations could be avoided and 14,000 revenue miles recovered, with such a fleet, if the quick change engine unit is made available at four major terminals. This so-called "Constellation Power Egg" permits a complete engine change in as little as 27 minutes.

Northwest Airlines plans to make use of loran facilities along its Alaska-Japan route and has started installing loran equipment, at its Twin Cities base, for training pilots and new navigators being hired.

TWA's International Division has placed an order for radio altimeters for all of its planes. This is not exactly an experimental project—in fact, the division is about the only commercial operating outfit which has made regular use of the radio altimeter—but the instruments to be replaced are wartime leftovers and the new ones will come much closer to giving desired results, both in high alti-

tude pressure pattern flying, and in low level approaches for which the old altimeters are not precisely scaled.

Most other operators, including the transcontinental division of TWA, do not seem ready to use radio altimeters. We hear several arguments against them as a terrain avoidance aid: necessity for frequent calibration, possibility of failure at critical moments, too many instruments already demanding pilot attention, etc.

Admittedly the radio altimeter in its present state of development is at its best over water, but there have been instances over land when it might have prevented trouble and it sounds like the new equipment TWA has ordered from RCA is a long step forward. In addition to being scaled for use at three levels—low altitude below 400 feet, medium altitude, and up to 30,000 feet for pressure pattern flying—the new altimeter will be gyro stabilized to read directly downward even when the plane is in a steep bank.

A cooperative ground service organization for non-scheduled operators is contemplated at National Skyway Freight's Burbank base, according to testimony given in the CAB air freight case by Flying Tiger president Robert W. Prescott. He mentioned Slick and Willis as companies which might join in the venture.

Miller Joins Luttrell & Senior

Col. Harvey K. Miller has been added to the staff of Luttrell and Senior, Inc., 331 Madison Avenue, New York. Miller, formerly with American and Eastern Air Lines and the Air Transport Association during the war, will head the company's international field maintenance division.

Operations—Maintenance Personnel

Henry C. Kristofferson has been appointed director of operations for the Pacific-Alaska division of Pan American Airways. With Pan American since 1934, except for war service with the Air Transport Command, Kristofferson will move from Brownsville to San Francisco to assume his new duties.

Jack Dees, who has been superintendent of production control for the past year at TWA's overhaul base, is being transferred to the airline's staff engineering department. Dees will work on new aircraft research and planning, with responsibility for liaison with the contract and legal departments in connection with procurement of new aircraft.

H. E. Carlton has been appointed station manager for Mid-Continent Airlines at Houston, Texas. Carlton, who joined MCA as a radio operator in 1941 and has recently been station manager at Shreveport, is opening the new station at Houston in conjunction with inauguration of service on the company's new Route 80.

Howard Brown, TWA engineering pilot and project planner on the Constellation program, has been named system staff engineering representative. He will provide liaison between TWA's system staff engineering department and the Transcontinental and International divisions.

Lee McBride, Delta Air Lines' assistant chief pilot at Fort Worth, has been granted a three-month leave of absence to assist in setting up operations for the new Norwegian airline, South American & Far East Airline. McBride is flying to Norway with a DC-4 in which he has been training Norwegian pilots for the new company.

Gordon F. Maxwell, formerly acting operations manager, has been made manager of flight operations for Pan American's Pacific-Alaska division.

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CAA Authorizes License Exchange

Pilots holding private or commercial pilot certificates issued prior to July 1, 1945, and scheduled to expire July 1, 1947, may now exchange them for new certificates and ratings comparable to those which the Civil Aeronautics Administration has been issuing since July of 1945.

The CAB has issued an amendment to Part 20 of Civil Air Regulations which provides: "A private or commercial pilot certificate which was effective on or after Jan. 1, 1942, and which was issued prior to July 1, 1945, will expire on July 1, 1947. Such certificate may be exchanged at any time prior to July 1, 1947, for a pilot certificate and the appropriate ratings provided for in this part."

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Wiring Dispute Delays Newark's High Intensity Approach Lights

Progress on installation of experimental high intensity approach lighting at Newark Airport, originally scheduled for completion by Jan. 1 (*American Aviation*, Dec. 1), has been delayed due to complaints against the type of temporary wiring used by the contractor.

Public Safety Director John B. Keenan ordered the work halted with charges that, in laying two 400-volt lines and one 110-volt line in a wooden raceway six inches above the ground, the contractor was creating a hazard which might result in fire or electrocution if struck by an airplane or touched by a workman.

The Civil Aeronautics Administration replied to Keenan's charges with the contention that wire and conduit specified by Keenan were not necessary in a temporary installation of this type. CAA said the installation met its standards and asked that the work be pushed to completion at the earliest practical date.

Jeppesen Moves Denver Offices

Jeppesen and Co. of Denver, Colo., *Airway Manual* and *Naval Airways Pilot* publisher, has moved its offices from the Colorado National Bank Bldg. in Denver to municipal airport, Stapleton Airfield. The company vacated 4,000 square feet of floor space to get 15,000 square feet at the airport.

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